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THE CAVALRY JOURNAL

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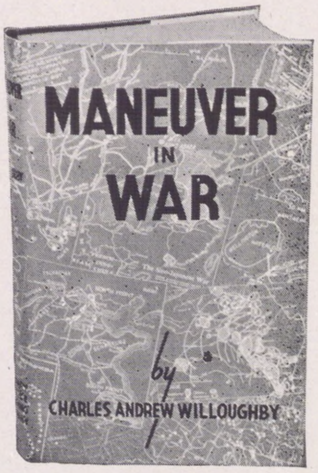
The Sixth Cavalry in the Fourth Corps Maneuvers

By a Staff Correspondent



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THE SIXTH CAVALRY IN TH

Colonel John Millikin, Commanding the 6th Cavalry inspects Troop G (Motorcycle Troop). Captain John K. Sells, troop commander and organizer of this unit accompanies the regimental commander. (Photo courtesy of Roy D. Tuley, Chattanooga Times)

→

For the first time in our military history, one witnessed in the IV Corps Maneuvers the presence of a cavalry element organically a part of the American Corps. The 6th Cavalry, authorized as a Corps Cavalry Reconnaissance Regiment last fall, and organized and equipped between December, 1939 and March, 1940, became a part of the IV Corps. The manner in which those duties and functions were performed during the maneuvers at Fort Benning, made self-evident the energy and industry which went into the creation and training of this regiment under the able guidance of its commanding officer, Colonel John Millikin.

As a Corps Cavalry Reconnaissance Regiment, the 6th Cavalry is organized as an eight troop regiment. The 1st Squadron consisting of troops A, B, and C, constitutes the horse element of the organization. Contemplated as a portée unit, it was a matter of regret that delivery of 55 horse trailers, together with prime movers, had not been made available prior to this phase of the spring maneuvers. (This equipment will be in the hands of the regiment prior to July 1st and will be available for the Third Army Maneuvers to be conducted during the month of August.) The 2nd Squadron, consisting of Troops E, F, and G, constitutes the tactical mechanized element of the regiment. Troops E and F are scout car units containing four platoons of four cars each in addition to troop headquarters. Two solo motorcycles form part of each scout car platoon. Troop G is a combat motorcycle troop consisting of four platoons of mixed sidecars and solo motorcycles. The sidecar, equipped with a seat over the rear fender, transports three men with M-1 rifles. Four such vehicles under a sergeant make up one section.

The Headquarters Troop contains the normal features —staff section, communication platoon, transportation platoon—but has in addition two other elements of importance in this type organization. These elements are the antitank platoon consisting of seven scout cars—a command car with six others, each towing a late model 37 mm. antitank gun. The remaining element is found in the pioneer and demolition platoon, consisting of four scout cars, each equipped with pioneer tools and hand demolition tools, together with 250 pounds T. N. T.—total T. N. T. in the platoon; 1,000 pounds.

The forward echelon of the regimental C. P. consists of six vehicles, five scout cars, and one message center vehicle. The scout cars are assigned respectively to the regimental commander, executive officer, S-3, S-2, and communications officer. In actual operations this group is the nerve center through which all elements of the regiment are controlled and directed, sometimes over a surprisingly widespread area.

The Service Troop is made up largely of a baggage section of 25 trucks, kitchen trucks, and similar vehicles. A large part of the personnel of this troop will be entailed with the operation and maintenance of the 55 horse trailers when received in the regiment. Considering the respectable amounts of gas and oil required by approximately 300 vehicles, forage for close to 400 animals, and subsistence for over 1,100 men and officers, there is much to keep the regimental supply officer and personnel of the Service Troop well occupied. This is true, particularly, in operations where these supplies must be laid down over a wide front.

It is to be noted that although conversion of the 6th Cavalry to a Corps Reconnaissance Regiment was authorized in the late fall, increased personnel of over 400 men was not secured until January. Motor equipment was delivered to the regiment during January and February and it was the latter part of February before the great bulk of the motorcycles was received.

When the reorganization of the regiment was finally determined it was provided that each troop receive the same allotment of older men and the same proportion of incoming recruits. This proved to insure a uniformity in training throughout the regiment. From close observation it was clearly apparent that the motorized and mechanized elements of the regiment were far more able to perform their prospective tactical missions in the maneuvers than *were* the horse elements. This is not to say that the horse elements were not able to fulfill effectively their rôle, but an incontrovertible example was furnished of witnessing horse and motorized elements side by side with the same comparable training. It is evident that with the modern youth of the country we may expect to develop soldiers for mechanized and motorized elements much quicker than for the horse elements. This proposition is one that ought to be fully considered by those responsible for our war planning in the years ahead.

MARCH TO CONCENTRATION

The regiment, less the 1st Squadron, moved out of Fort Oglethorpe on its way to the concentration of the IV

OURTH CORPS MANEUVERS

By a Staff Correspondent

Corps at Fort Benning on the morning of April 8th. The 1st Squadron had preceded the regiment, by marching, a few days before. The march to Fort Benning was made in easy stages, averaging 25 m.p.h. the first day. The speed of the column was daily increased until on the final day the regiment was moving at 35 m.p.h. at the head of the column. The manner in which the radio and motorcycle messengers were utilized in maintaining march control and road discipline was most effective. There are features of moving long columns at high speed which should become a matter of definite doctrine in our army. When these movements are made in the midst of routine civil traffic they become even more difficult. In this regiment there is granted a leeway of ten miles per hour between the head and rear of the column; that is, with a speed of 30 m.p.h. at the head of the column, it is believed vehicles at the tail of the column will be averaging close to 40 m.p.h.

At these speeds, there must be a generous distance permitted between vehicles and wider distances allowed between tactical elements. Much thought is being given within the various arms as to the employment of marching by the *system of infiltration*. In this system, individual vehicles are started from an overnight bivouac or any assembly area at half-minute (or minute) intervals and are enabled to take up at once the prescribed rate of march. At 30 m.p.h. this would average a distance of 440 yards between vehicles, or about four vehicles per mile of road. With these extended distances it is believed there will be little interference with the routine traffic on the highway. The main feature, of course, is the lack of a vulnerable target presented to hostile aircraft.

IV Corps Maneuvers

In the IV Corps Maneuvers the corps, under the command of Major General Walter C. Short, habitually represented the Blue Force. The Red Force was represented by the provisional 4th Division, made up of 3 Infantry regiments, reinforced by suitable elements of artillery, engineers, and other auxiliary troops under the command of Brigadier General Robert O. Van Horn. During alternate phases of the maneuvers certain detachments were made from the IV Corps to augment the Red Force.

The maneuvers proper were divided into four separate phases. The participation of the 6th Cavalry in each phase will be covered briefly.

1st Phase:

In the first phase, the IV Corps advanced from the northeast as a covering force of a larger mass with the mission of securing the high ground south of Upatoi Creek. The mission of the 6th Cavalry was that of screening and covering the advance of the corps. Due to the nature of the ground and distances involved, the regimental commander assigned to the 1st Squadron a zone of approximately ten miles wide on the right of the corps zone of advance. (Without horse trailers being available in the maneuvers, it was impossible to utilize this feature in the conduct of the regiment. Accordingly, it became habitual to march the horse squadron from the base camp or the last bivouac at the end of one phase to the general area in which it would be used in the next phase or would have detrucked if the trailers had been available.) The remainder of the regiment covered the rest of the corps front over a distance of approximately 55 miles—the regiment accordingly was covering a front of over 65 miles.

Actual hostilities broke at daylight, April 15th. The horse squadron moved promptly forward in its zone of action and met little resistance until it reached Upatoi Creek after some eight or ten miles of marching. There it encountered a serious obstacle in the theoretical destruction of McBride's Bridge across the creek. Acting expeditiously, the squadron located fords above and below the bridge and, by fording the stream, succeeded in reducing the hostile elements protecting this obstacle. Continuing this fast pace, the squadron launched a well coordinated envelopment against the high ground dominating the crossing and was able to hold it for a considerable period until the arrival of reinforcing infantry. By this decisive action the Blues, by occupying critical terrain, won considerable advantage on this part of the front.

To the east, the remainder of the regiment moved out promptly at daybreak on their mission of screening and covering the corps on their wide front. Zones of advance were allocated to scout car troops and in turn redivided and allocated to platoons. With an effective demonstration of mobility, first contacts were made well to the front. Encountering superior forces, advancing by widely separated columns on a broad front, the scout car platoons were faced by the task of delaying the hostile columns and securing identifications. Within a relatively short period regimental headquarters, through radio communication from troops, had built up a very definite picture of the hostile dispositions and their scheme of advance. Orders from corps directed the regiment to hold on a definite line until cavalry elements could be relieved by infantry. By 3:00 PM the infantry had assumed this duty in front of the mechanized units of the regiment. The regiment, less the 1st Squadron, was then ordered by corps direction to assemble on the extreme left flank of the corps in order to protect the flank and reconnoiter the enemy right flank and rear. By dark the regiment was assembled at a point some sixty miles from the point where the furthest scout car platoon had been operating.

During darkness of April 15-16 scout car patrols advanced well forward and succeeded in locating hostile road blocks which had been established on this part of the hostile position.

On the opposite flank, the 1st Squadron at dark received orders to occupy a gap on the Blue Front which prevailed between the two divisions of the Blue Force. This mission was accomplished under difficult conditions of close terrain and darkness. Before recall sounded late the following afternoon *this squadron, within a 24-hour period, had succeeded in covering a distance of over 70 miles.*

April 16th was devoted largely to penetrating the lines of hostile outposts and harassing the right flank and rear. The commanding officer of the 2nd Squadron, locating a break in the enemy's position, succeeded in assembling several cars, and catching a hostile artillery column on the road, executed an attack down the road in column of vehicles against the entire hostile artillery column (He went in shooting with all side guns wide open), an act which resulted in an umpire suspension of over two hours for the hostile artillery.

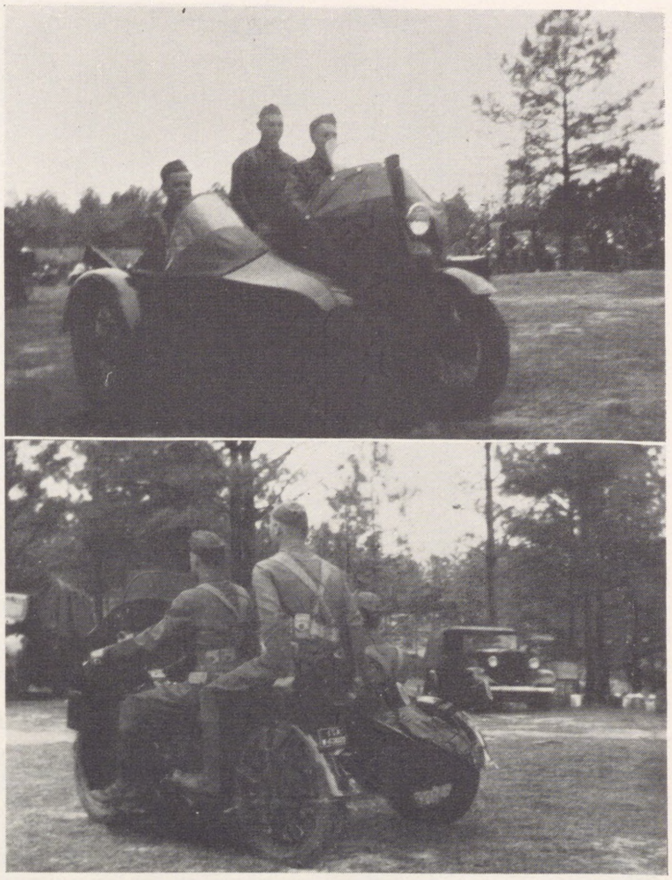
2nd Phase:

In the second phase the Corps Cavalry Reconnaissance Regiment again was employed on the mission of screening and covering the corps. In this exercise the front covered was approximately 55 miles in extent. Due to the nature of the terrain the regimental commander assigned the 1st Squadron less one troop, reinforced by scout cars and motorcycles, to a twelve-mile sector, and the remainder of the regiment with one horse troop to the remainder of the front. In this phase the motorcycle troop (less detachments) was given a definite sector charged with the establishment and protection of road blocks and patrolling to the front. Here was an excellent example in which the various components of the regiment demonstrated the ability of working as a team. The final day of this phase was executed after an all night rain which became a driving storm during the first three or four hours of daylight. On the muddy clay roads of southwest Georgia the motorcycles encountered considerable difficulty, particularly on slopes of any considerable incline. In the latter part of the morning, scout car elements were assigned a mission which took them over a road which was declared impassible by the engineers. Of the sixteen scout cars involved, eleven went through with little trouble, while the other five eventually required assistance. It was noted that the new cars encountered slight difficulty, but the five which required assistance were of the older model.

3rd Phase:

The third phase was perhaps the most interesting one of the maneuvers from the point of view of the cavalry. The regiment formed a part of the divisional Red corps, and in this event was given, primarily, its first definite reconnaissance mission. The corps commander wisely had seen fit to reinforce the cavalry with an attachment of one battalion of infantry, a battery of horse artillery, a company of engineers, and a company of chemical troops. Prior to daylight the cavalry had established twenty-one road blocks covering the main avenues of approach on a fifty-mile front. By daylight the infantry had been posted in protection of these blocks, reinforced with detachments of engineers and chemical troops. By this action, the cavalry was free for its primary mission of reconnaissance. Contact was gained with six advancing Blue combat teams by 5:00 AM, and by 5:30 AM these elements had been identified and were being delayed by cavalry patrols on a front of approximately forty miles. The effectiveness of this delay was evident from the fact that it was not until 11:45 AM (seven hours after first contact) that the first road block was threatened. As the road blocks were forced, chemical troops fired gas containers, and the infantry then fought a delaying action back to the Red main line of resistence. So effective was this delay, assisted by scout car platoons of the regiment, that by dark the main position was still untouched and undeveloped. In the meantime, the bulk of the mechanized elements of the regiment withdrew slowly and by late afternoon had assembled on the north flank of the position.

During the night, the Blue plan of attack involved the displacement of one division from the south flank to their north flank for the purpose of launching a surprise daylight attack in that area. Reconnaissance was sufficient to discern this movement well before daylight which dissipated the element of surprise. One combat team on the extreme north flank was discovered and by expeditious cavalry action, together with the destruction of a key crossing, this combat team was prevented from launching its attack. Later the cavalry commander, with effective co-ordination, very quickly assembled a sufficient force to participate in a Red counterattack against the flank of a hostile salient. These two incidents proved to have considerable influence on the latter stages of this phase of the maneuvers. It is believed that this one phase played an important rôle in emphasizing to the other arms the importance of security and reconnaissance and the necessity of depending upon trained cavalry to fulfill that vital mission. By the effective work of the cavalry here, the infantry became foot-conscious and encountered the need of actual ground movement, rather than movement by truck.



Front and rear views of motorcycle half squad. Note rifle for each man

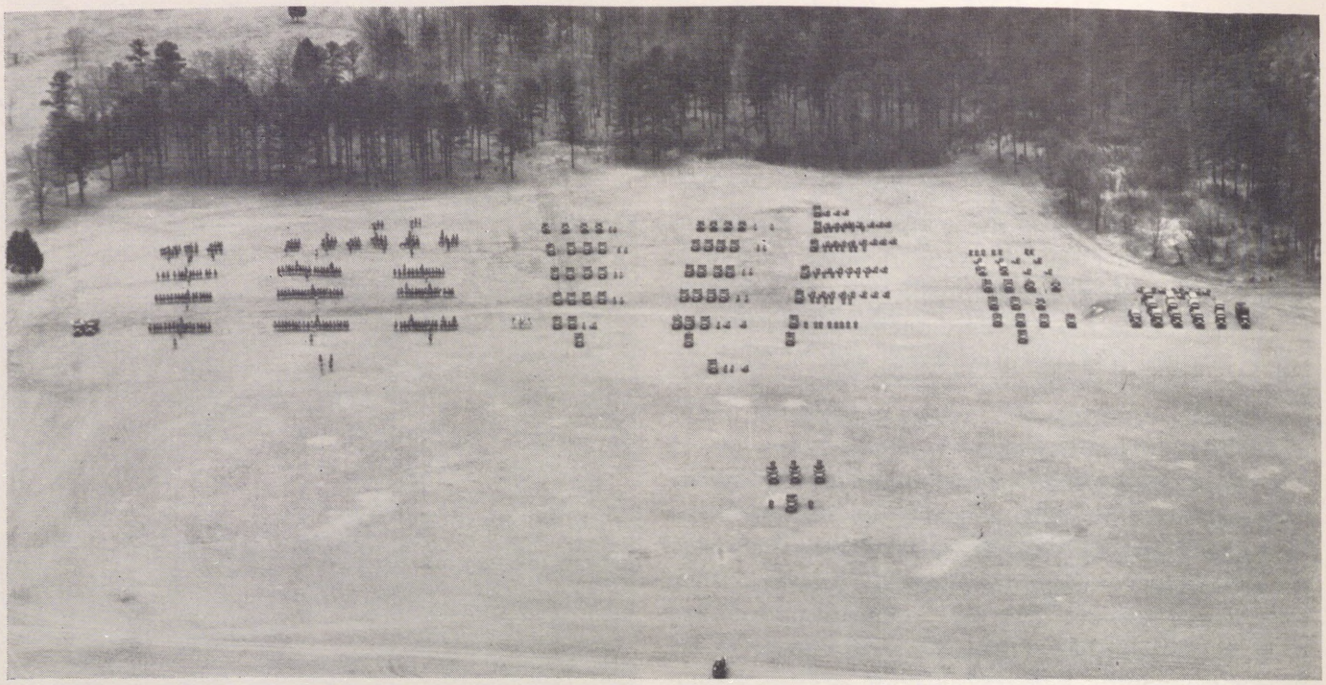
4th Phase:

The fourth and last phase was largely an exercise designed for the corps staff in the logistics and control of large elements on the battlefield. It was designed so that it might culminate in a mass tank attack on suitable terrain within the Fort Benning reservation. It was noted that the tank brigade attacked on approximately a two-mile front, which permitted only one wave in strength and a rather weak second wave. Encountering the antitank battalion, which formed a part of the opposition, it is doubtful as to whether any far-reaching penetration could have resulted. It would seem that had the penetration of the hostile position been attempted on a much narrower front, with an attack by twelve or more waves, the picture of power of great force would have been presented and the results more effective.

LESSONS

1. Reconnaissance and Security

The IV Corps Maneuvers served, undoubtedly, to emphasize the age proven value of strong and constant re-



Review of 6th Cavalry—over 1,100 officers and men. From left: Motorized Band, 1st Squadron, 2d Squadron, Headquarters Troop, Service Troop (less detachments). Photo by U. S. Army Air Corps

connaissance, and the vital necessity of security. Unless that assurance of security is present, there creeps a doubt into many operations, which on paper or the restrictions of maneuver appear otherwise feasible. The impression was developed at times that reconnaissance, the progenitor of security, was being overlooked and disregarded.

Again, as proven in Norway recently, if you know the strength, movement, and probable intentions of an enemy it is always possible to defeat him with smaller forces.

2. *Reconnaissance Vehicles*

It is to be admitted that the craft of scouting and patrolling has long since become a definite procedure for ground elements, meaning troops on foot and horseback. It would appear that the same principles ought to apply to this rôle when conducted by troops in vehicles. This is not believed to be a matter of fact at this time. There is an art to reconnaissance, which has not yet become a routine of perfection under the employment of vehicles. There is a tendency to stick to roads and to dart off into rougher terrain only with reluctance. Much of this inclination is due undoubtedly to the great prevalence of off-limit areas on terrain in which our maneuvers are conducted.

As one observes and analyses the problems encountered by wheeled vehicles on this duty, the stronger the conviction grows that *we should develop without further delay a track vehicle for this purpose.* Certainly, with the ingenuity and effectiveness of our national motor industry, the design of such a vehicle is no great problem.

3. *Reduction of Road Blocks*

The wheeled vehicle has limited powers in the reduction of any road blocks which may be encountered, particularly if the block is protected by hostile fire. This feature is even more pertinent when the terrain adjacent to the road block does not permit free and unhesitant maneuver off the road. It is to be noted here that any enemy who constructs a road block in an area which lends to our maneuver off the road is more friend than foe. We must plan always on encountering road blocks at a particular point where it can be outmaneuvered only with considerable difficulty. There is little in the wheeled vehicle platoon which affords any facility to the reduction of a hostile block by maneuver. This thought leads to the conception of a reconnaissance team with an element that affords security well to the front, and at the same time, possesses a maneuvering element for ready employment when resistence is encountered. An additional scout car, utilized as a personnel carrier for a rifle squad, might fulfill this need. The soundest conception lies in the combination of scout cars, portée horse elements, and suitable motorcycle attachments. *There is no medium which exits that excels the mounted trooper for cross country mobility under all conditions.*

4. *Motorcycle Combat Elements*

The motorcycle Troop of the 6th Cavalry is probably our first effort to create a combat element utilizing the motorcycle as transport of fire power. As to whether the capabilities of the motorcycle are adequate for this tactical purpose, only additional tests will decide.

The necessity of the motorcycle for control, command and messenger purposes is paramount. It is to be doubted whether highly mobile forces can be properly handled in their essential function without this medium.

5. *Communications*

Perhaps the greatest problem existing in a highly mobile element is that of control. This factor can be accomplished only through adequate and effective communications.

With this facility functioning properly, it is surprising the degree with which a coördinated effort can be exercised over a widespread area.

6. *Engineers*

In the present day employment of fast moving columns there should be a clear visualization of the importance of engineer troops. High speeds and preconceived schedules are impossible without the presence of trained engineer troops. Not only do they permit uninterrupted advance, but on the other extreme, are imperative in the accomplishment of features aimed at hostile delay. In an advance, an engineer detachment should always be present toward the head of the column.

7. *Delaying Action*

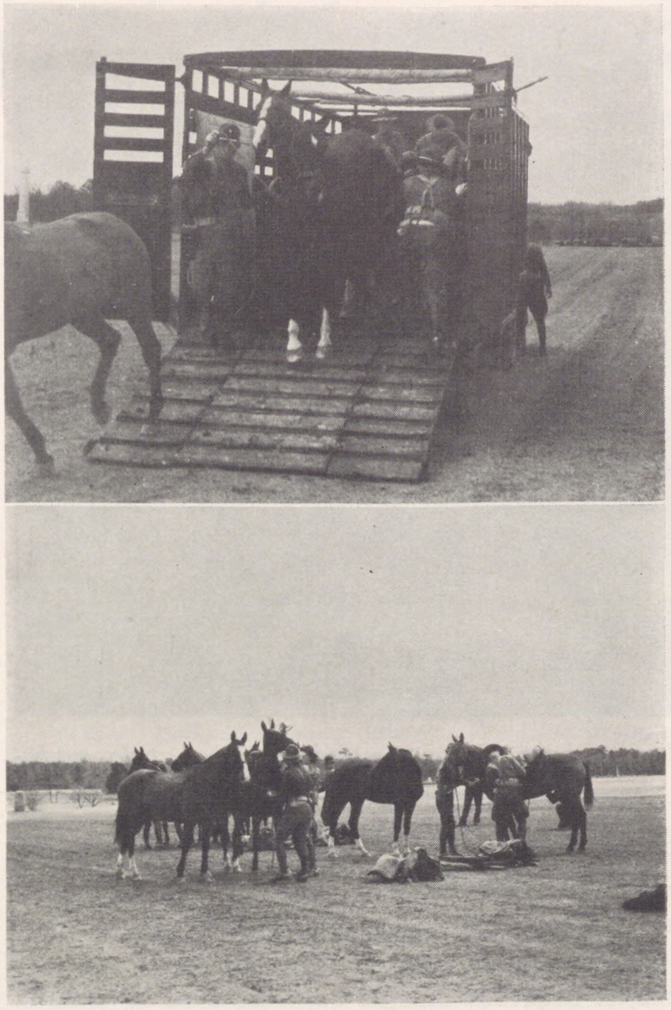
Against an alert enemy, it is no longer an easy matter to delay him by fire alone, particularly, if imposed only against his front. In the first phase of the maneuvers, cavalry scout cars were very effective in delaying hostile infantry by the fire from cars posted along or near the road on successive crests. By the third or fourth day the opposing infantry had learned that antitank guns were essential near the head of the column, and on many occasions even constituted a part of their point of the advance guard. Serious delay against an able enemy can be effected only through joint action against his head and flanks. Flanking fire is possible only through maneuver, and we must realize that in average terrain maneuver against hostile flanks is made possible only by high cross country ability. Again, the mounted trooper is preëminently qualified for this purpose.

8. *Horse and Motor Soldiers*

With the average type American youth of today it is a much simpler problem to qualify him for field service in a motor element than in a horse unit.

9. *.50 Cal. Machine Gun*

It was apparent in these maneuvers that there was little common agreement on the capability and effectiveness of this weapon. Definite figures should be available to all as to the true capability of the weapon and that capability should be a matter of cognizance by all officers detailed on control or umpire duty.

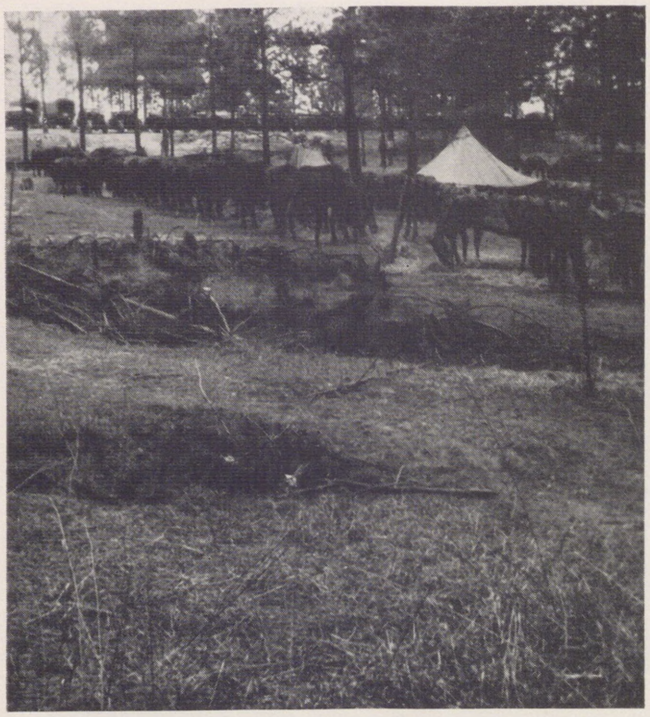


Top—One squad, Troop A, 6th Cavalry unloading from trailer. Bottom—Same squad saddling. Total elapsed time for unloading and saddling 3½ minutes

10. *Slow-Flying Airplane*

In a highly mobile organization the requirements of command, communication, and liaison agencies are so vital, and at the same time so subject to interruption, that there should be available an additional facility capable of assisting in this field, particularly under the stress of combat. The slow-flying airplane possibly may be an answer to this necessity. It should be understood that this added feature is not intended primarily to augment reconnaissance, but more to augment the machinery of control, command and communication. In this capacity it may prove the missing cog which now exists when normal facilities break down. Necessarily, it must be an airplane

Antitank Platoon, Headquarters Troop



In base camp. Horses significantly backed-up by mechanized elements

capable of landing and taking off in a restricted area, easily maintained, and easily camouflaged.

11. *Terrain—Maneuver Area*

Much of the artificiality in our maneuvers, which is a subject frequently brought up, is involved in restricted areas over which troops cannot maneuver. This leads to the idea that there should be available on each coast of the country as well as in the southwest, an area of such dimensions that large masses may maneuver with all the freedom of actual warfare.

Comment also is heard on the artificiality of the heavy wooded country encountered in southwestern Georgia. Rather than the exception, this type country is the general rule, particularly in the eastern part of the United States. It is in this type country that war will be waged for the most part if encountered in the Western Hemisphere.

12. *Maneuver Tempo*

It has been stated before that we permit an artificially fast tempo to creep into the conduct of our maneuvers. This statement is believed to be true. Rather than reducing the general purposes in any particular phase of a maneuver, would it not be wise to reduce the number of tactical lessons to be demonstrated and permit tactical operations to culminate into their final stages of massed fire and movement within a more reasonable time limit? Through this procedure, troops themselves and the great mass of officers in the lower command echelons would be given an opportunity to witness the manner in which combat occurs and develops over wide fronts, and at the same time, a higher appreciation of the vicissitudes and problems concerned with evacuation and supply, especially, in so far as modern ammunition requirements are concerned.

13. *Service Transport*

In the opinion of the writer, the new 6 wheel drive, 2½ ton truck proved a most satisfactory vehicle in the IV Corps Maneuvers.

By increased baggage space, a cavalry unit is permitted to remove excess weight from all combat elements. This includes removal from horses of every item not essential for combat, particularly cantle rolls. The reduction of weight and paraphernalia from animals and combat vehicles in the cavalry remains a foremost subject.

The new gasoline kitchen truck, also, proved highly efficient and satisfactory. Through proper administrative planning it may lend many advantages to subsistence matters in actual operations.

14. *Umpire System*

For the major purposes of coördinating affairs among higher tactical echelons, our umpiring system appears efficient and satisfactory. For the creation of an air of reality along the line of actual combat, it would appear that considerable improvement can be sought.

CONCLUSION

The IV Corps Maneuvers demonstrated, undeniably, the need and effectiveness of a Corps Cavalry Reconnaissance agency. The efficient and effective manner in which the 6th Cavalry performed all assigned missions speaks highly for the conception of this type organization and the manner in which it has been equipped and trained. Considering the fact that the regiment entered the maneuvers lacking items of essential equipment, such as its full complement of radios, further substantiates the age old reflection that the flexibility of cavalrymen permits accommodation of the arm to any situation. The usefulness and importance of the cavalry in these maneuvers may be exemplified by the words of General Short in his final critique, "The efficiency of the 6th Cavalry in reconnaissance and screening leads me to believe that a mechanized reconnaissance troop should be made a part of the division. The troop should have three platoons, one available for each combat team for reconnaissance. The whole troop should be used by the division for screening purposes."

NOTE: The opinion prevailed in the minds of other higher commanders that any reconnaissance and security agency forming, organically, a part of the infantry division might preferably consist of a composite element such as a squadron of two troops, one horse (portée) and one scout car. Others believed that the Corps Reconnaissance Regiment might well be increased to the point which would enable suitable detachments to be made to the divisions of the corps. Experience to be gained in future maneuvers may develop definite ideas on this subject.

Cavalry Affairs in Congress

Following are extracts of the comments of *Major General John K. Herr, Chief of Cavalry,* before the Subcommittee (on Military Affairs), of the Committee on Appropriations, March 11, 1940:

Instruction in Cavalry Activities

Mr. Snyder. General Herr, it is always a pleasure to have you with us.

General Herr. Thank you, Mr. Chairman.

Mr. Snyder. We have before us the usual modest estimate for the Cavalry School, upon which I see no occasion to dwell, but we should be glad to have you talk with us about your branch along any line about which you feel we should be advised. We should like to hear about your Cavalry School.

General Herr. We now have 10 courses at the Cavalry School as follows:

Regular course.
Advanced equitation course.
Noncommissioned officers' course.
Advanced equitation noncommissioned officers' course.
National Guard and Reserve officers' course.
Noncommissioned officers' refresher course.
Noncommissioned officers' National Guard course.
Refresher course, Regular Army officers.
Horseshoers' course.
Saddlers' course.

The advanced motors and communications courses have been added for the coming year. This is due to the increase in mechanization. The school has many activities. It is there we make experts in small-arms firing, horsemastership, the care of horses in campaign, horseshoeing, marching, and all other matters which pertain to modern cavalry, keeping abreast of all developments in other countries in close liaison with the office of the Chief of Cavalry. From this center the latest developments spread throughout the Cavalry service. There is a constant flow of officers and students from the regiments to the school and from the school to the regiments. The Cavalry Board, which is also stationed at Fort Riley, considers all matters of technical equipment and other problems of organization, tactics, and preparation of manuals which facilitate the vitalization of the Cavalry arm.

EXTENT OF INSTRUCTION IN THE MECHANIZATION PHASE

Mr. Snyder. To what extent do you give instruction in the Cavalry School in the mechanization phase?

General Herr. We have about 80 hours of instruction in motorization and mechanization in the regular, or basic, course and also a special advanced motor course, previously referred to, of about 4½ months.

Mr. Snyder. What do you have out there in the way of mechanization equipment for giving practical instruction?

General Herr. We have at the present time in vehicles only the scout cars which belong to the Ninth and the Second Cavalry, which are stationed at Fort Riley. There is to be delivered this year sufficient combat cars to enable us *to activate* a combat-car squadron. We have otherwise various types of engines and other equipment in the motor shops which are used for instruction of classes.

Mr. Snyder. The advance of this type of equipment has made it necessary to bring into the Cavalry an entirely different type of horseman, has it not?

General Herr. Yes.

Mr. Snyder. Men to do this job need to have a mechanical bent.

General Herr. They must either have it or acquire it.

Mr. Snyder. And if they do not have an inherent turn, they cannot acquire it so easily.

General Herr. It is more difficult. We have become mechanically minded people because this is a motor country and we have no difficulty in getting motor mechanics.

Mr. Case. Is it not a fact that it is easier to get men with a mechanical background than it is to get good horsemen?

General Herr. That is true.

Mr. Snyder. The efficiency and effectiveness of mechanized weapons depend largely, do they not, upon the type of operating and maintenance personnel?

General Herr. Very much so.

Mr. Snyder. How often is the personnel changed out there?

General Herr. The instructors are generally on a 4-year detail but are sometimes held over for an extra year. The noncommissioned officer specialists and instructors are retained as long as they see fit to remain in the service. It is difficult, however, to retain these experts because they are able to get higher pay on the outside.

NEED FOR LARGER TRAINING AREA

Mr. Snyder. Is Fort Riley a good place for maneuvers?

General Herr. It is not big enough.

Mr. Snyder. What do you mean?

General Herr. There are only 19,000 acres.

Mr. Case. How many do you need?

General Herr. I feel we need 80,000 acres at Fort Riley.

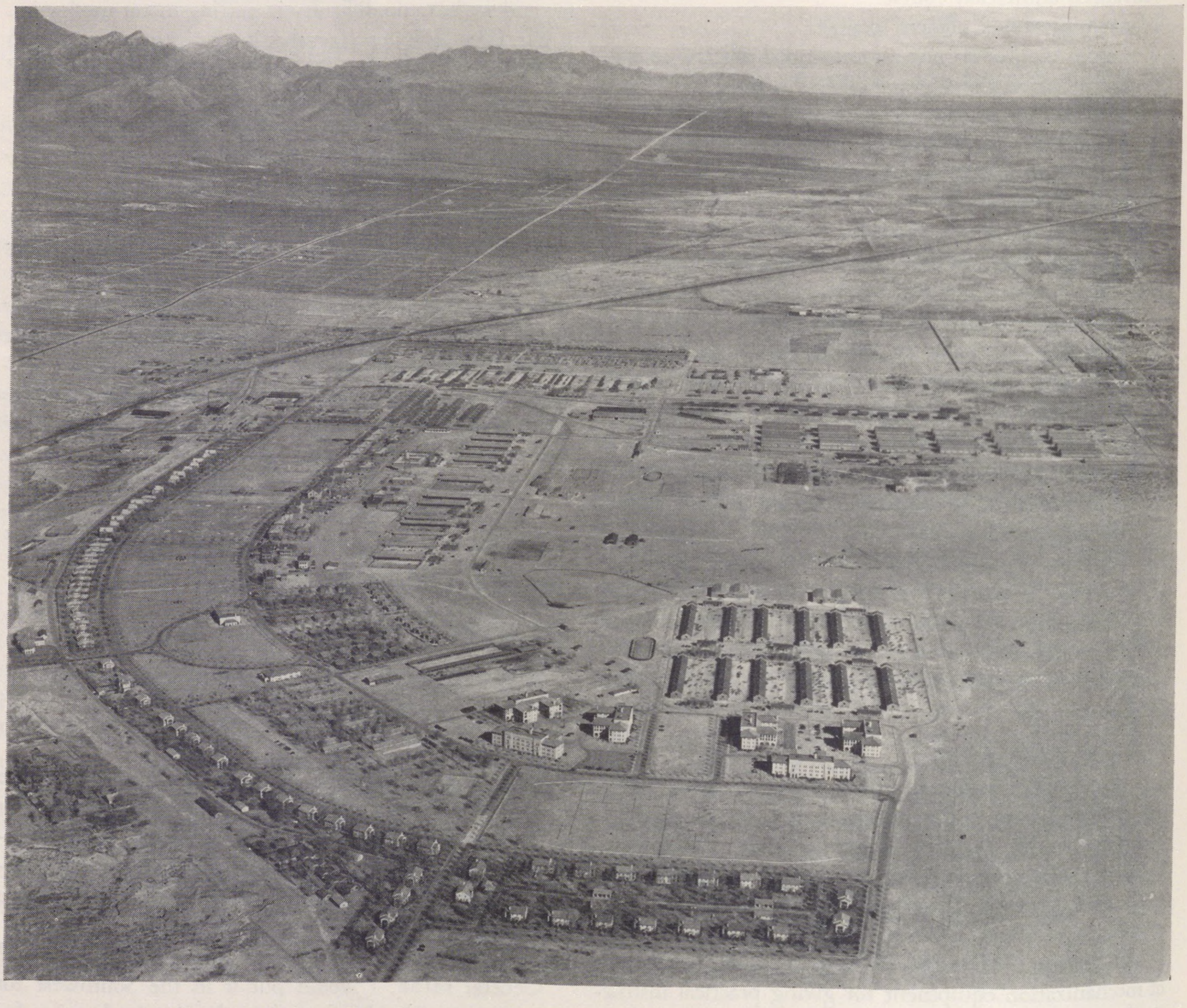
Mr. Snyder. Would Fort Benning be a better place, they have 96,000 acres there?

General Herr. Possibly it would. In my opinion the mechanized cavalry should have a very large training area over which to develop their exercises. It is very often necessary to cover 30 to 40 miles in the development of a problem. I would have it in the Southwest with the rest of the Cavalry.

Mr. Snyder. Why would you put it in the Southwest?

General Herr. I would put it in the Southwest for many reasons. In the first place the present location for the Seventh Cavalry Brigade in a thickly populated area with little opportunity to acquire the terrain necessary for maneuvers is not suitable. In the second place the mechanized cavalry should be contiguous to the bulk of the horse cavalry where it may train with them, that is, in the Southwest. It is my desire ultimately to establish for training purposes a cavalry corps of two horse divisions and a mechanized division. This would be a team of great mobility and power; it would require vast spaces over which to train. In order to perfect the training of any team, whether it be a football team, a polo team, or a military team, one essential element is to have a suitable field or area in which to practice your plays. It is singular that in all this great country of ours we have no such area. There is a practical possibility of securing such an area at small cost, well adapted not only for training purposes for cavalry corps, but also for large combined maneuvers, and as an asset of greatest value to the Nation in the advent of future mobilization. It is especially favored by nature, including varied terrain, mountains, deserts, prairies, and with an unequaled climate, where troops could train throughout the year. It is in a fine strategic location.

While in command of the Seventh Cavalry at Fort Bliss, Tex., I had opportunity to study the possibility of the area to which I refer. Using El Paso as the center, with a radius of approximately 100 miles, beginning almost directly north in New Mexico, describing an arc of a circle, from thence east, and south to the Rio Grande River, we include a semicircular area of about 6,700,000 acres. This is probably the cheapest suitable area that could be secured in the whole United States, because in that part of the area which is included in New Mexico about 74 per cent is under Federal domain and 19 per cent under State domain; the remainder which is privately owned could be acquired, to include reimbursement for all rights, at a cost not to exceed $2,000,000. That part which is in Texas is mostly land that is not even good enough to be classed as submarginal. It is estimated that the entire Texas area could be acquired at a cost not to exceed $3,000,000. The cost of the entire area would be a small fraction of one battleship or a regiment of tanks. When one considers the very great asset for national defense such an area would be, it seems almost incredible that we should neglect to take advantage of this immediately for future needs. At the



Looking north from Fort Bliss, a terrain of vast distances comprising ground of every type.

present time the military reservation at Fort Bliss consists of a paltry 8,000 acres, which is entirely inadequate for exercises. In order to train the troops they are obliged to roam over land belonging to ranchers and which is permitted purely by way of favor. The land available for this purpose is rapidly vanishing because it is being fenced in for private use in increasing segments. The last Congress authorized the purchase of about 50,000 acres to be appropriated for by this Congress in order to somewhat ease this situation. The cost of this was to be about $800,000. The second step, the acquisition of about 670,000 acres at an estimated cost of $1,100,000, has received favorable consideration by the land board of the War Department. The third step is still a matter of study.

Mr. TERRY. Could you not lease additional acres when you have to use them?

General HERR. Not for daily use. Lands have been leased at times at a long distance from the post for use in the yearly maneuvers but this has proved entirely unsatisfactory because the area is always spotted with considerable sections which cannot be leased. This leads to artificial restrictions and restraints which preclude the free maneuver, a condition necessary to obtain the best results.

With the concentration of horse and mechanized cavalry such as I visualize and with the great area over which to train, practically all problems of cavalry operations could be solved insofar as can be done in peacetime. We would get a very complete solution as to the employment of the mechanized division in coöperation with the horse divisions in all types of cavalry operation. We would learn precisely what mechanization can do over all types of terrain and what it cannot do and finally we would arrive at a very just estimate of what the proper proportion of the essential elements of cavalry should be. At the present time, considering the mechanized elements of the horse units and of the two Cavalry Corps regiments, as well as the Seventh Cavalry Brigade mechanized our available combat cavalry is 42 per cent mechanized and 58 per cent horse. In view of the fact that mechanized cavalry cannot flow over all types of country, I am confident that this is as far as we can go at the present time in the Regular Army as regards the proportion of mechanized cavalry to horse cavalry. The varied terrain on this continent and this hemisphere would preclude the use of mechanization to a great extent except for favorable areas with good road nets and terrain.

FUNCTIONS OF CAVALRY IN MODERN WARFARE

Mr. CASE. General, will you put a statement in the record on the functions of cavalry in modern war as revealed by operations in the current excitement over in Europe?

General HERR. Yes; I will be glad to do that.

Mr. SNYDER. Thank you very much, General.

General HERR. In order to understand that which is to follow one must first know what modern American cavalry is and how it fights. There is vast ignorance about these basic fundamentals not only in the minds of the civilian population but in some echelons of the Army itself. Because the horse is rarely seen on the modern motor roads and because of the fragmentary historical recollections lingering in the minds of the ordinary citizen, such as the Charge of the Light Brigade, "Into the valley of death rode the Six Hundred," the sunken road of Waterloo, and so forth, the illusion prevails that horse cavalry is outmoded because it is outspeeded by the motor on the highways and because a surging mass of mounted horsemen, charging with drawn sabers, is only courting sudden death when it tries to attack in the face of modern machine-gun fire, barbed-wire entanglements, and other obstacles. Let us dispel these illusions once and for all.

A division of modern cavalry is supported by the same kind of echelons as is the modern infantry division; that is, modern artillery, engineers, and signal, ordnance, and medical troops. All its supplies are carried by motor trains; there are no longer any horse-drawn vehicles for supply. There is a division reconnaissance squadron of scout cars and motorcycles. The division has two brigades. Each brigade has two regiments. At the present time with the brigade echelon we have an experimental platoon of six 37 antitank guns drawn by armed scout cars and also six 81-mm. mortars. There are seven scout cars for reconnaissance purposes with each regiment. Within the regiments all other weapons are packed on horses. This includes rifles, light machine guns, heavy machine guns, and .50-caliber machine guns which are highly effective against tanks. We thus have a modernly equipped and modernly organized force of great flexibility with practically as much fire power per man as is found in the infantry and with the great advantage of mobility; that is, you can transport this fire power over all kinds of terrain and place it at advantageous positions to influence the fight in speedier and more flexible manner than can be done by men on foot. You can also do this in places where no machines can go.

It must be remembered that instead of charging with drawn sabers or lances the modern cavalry rarely fights mounted; for the most part it fights dismounted. It simply maneuvers mounted in order to get advantageous positions. There are times when mounted action will be used in conjunction with dismounted action or when it may be used chiefly by small units in the case of effective surprise or when conditions of enemy disorganization are such as to render it effective. Under no circumstances will foolish mounted attacks be made against overwhelming enemy fire. You must remember that in spite of the fact that the horse is rarely seen on the motor road, the man is also rarely seen on the motor road except when hitchhiking or driving a car and that horses may also be carried in motors when need be to reach quickly the theater of action. After one arrives in the theater of action in modern war, there will be very little chance to use roads, certainly not in great masses or at any speed, and it is there that the great flexibility and mobility of horse cavalry reaches its apex of value.

Having shown, then, that the modern American Cavalry is not the imagined cavalry of the medieval ages but an up-to-date modern combat team, let us consider what its functions are in modern war, bringing in where applicable its use in recent European operations.

In general, it may be stated that the functions of cavalry in modern war are the same as throughout recorded history of wars, except as amplified, restricted, or modified by modern conditions and weapons. It is also obvious that in order to remain effective it must keep pace with such developments. The American Cavalry has done this. While the European nations, hampered by the European traditions of the arme blanche, were clinging to the mounted charge, the American Cavalry, following the examples of Forrest, Buford, and Sheridan, has admittedly led to world in adapting itself to the conditions of modern war by abandoning foolish mounted attacks and using speed of movement to put the fire power on the ground.

What then is the function of cavalry? In general it may be said that as a member of the ground combat team of infantry, field artillery, and cavalry it is to be employed in any manner in which the commander may see fit in order to achieve victory in campaign or battle. It must be remembered that the infantry is the chief member of this ground combat team and that the artillery exists chiefly to promote the success of the infantry by means of its effectiveness of fire. The cavalry is employed in such manner as to employ its characteristics of mobility and flexible fire power for two general purposes. First, in periods of concentration to protect and screen the infantry-artillery forces, to protect them from surprise attack from observation by ground units, and by means of ground reconnaissance gain such detailed information of the enemy as may be of value to the commander. During campaign or battle it may be used to guard the flanks, it may be used to attack the enemy weak points, or by wide and sweeping movements it may be directed to distant flanks or rear in order to strike vulnerable forces or installations of the enemy. It is ideal for use to interpose between a command and advancing enemy reinforcements for purposes of delay. The same holds good in case of retreat. This because of its ability to put its fire power on the ground, hold up an enemy, make him deploy and then before the attack is driven home to remount and seek a second position. In the pursuit it is invaluable. Throughout all history the great commanders have invariably known how to use their cavalry in the pursuit for the destruction of the enemy. From the time of Hannibal at Cannae to Napoleon at Austerlitz and Jean and Wellington at Waterloo, it has been the employment of this swift moving arm that has accomplished the victory of destruction. Without the cavalry to complete the knock-out blow the enemy simply falls back to fight again. Cavalry is of special use to be held as a mobile reserve pending developments of combat.

It is true that the precise methods of employment as well as the scope of action of horse cavalry have been affected to a great extent by air and mechanization. It is also true that these new arms are able to do some of the things formerly done by cavalry, such as distance reconnaissance. It is also true that, by coöperation with the air and by utilization of mechanized cavalry in conjunction with horse cavalry, the scope and effectiveness of modern cavalry has been greatly amplified. The missions of reconnaissance are amplified by depending on the air to discover the enemy main concentrations at great distances and by utilizing mechanized cavalry at a considerable distance and wherever the road net is suitable. The efforts of the horse cavalry may thus be concentrated with greater effectiveness to the closer terrain and over all those intervening areas often heavily wooded and cut up by streams or gullies and which cannot be adequately observed by the air nor can they be combed by any vehicle of whatever nature. Only the man on foot or the man on horse can execute adequately these detailed ground reconnaissances and the man on the horse can do it much faster than the man on foot. Also, it is only the noiseless horse patrols that are able to slip by enemy detachments, secure information and return with it.

In delaying action, although the mechanized cavalry can be used very effectively where the road net is good and the terrain suitable, it can by no means flow over the intervening terrain which is often accessible only to horse cavalry. It may be used in coöperation with the horse cavalry but it is not suited for this type of action when used alone to the same degree as is horse cavalry. In the pursuit we find again that the power of destruction is greatly amplified by the use of the air and the mechanized cavalry but it must be remembered that these echelons are not alone capable of accomplishing the maximum destruction unless we have great groups of horse cavalry in addition. The air will unquestionably bomb and machine gun disorganized enemy groups, particularly where they are on the roads or concentrated. Mechanized cavalry will strike them along the highways and on favorable terrain but an alert enemy, even though defeated, will take every opportunity to destroy the roads and bridges and other avenues of pursuit, even laying waste to the entire country in his rear. This will stop in great measure any pursuit by mechanized cavalry or infantry in trucks. Horse cavalry, because it is independent of such means and can cross practically all obstacles is supreme. Furthermore it can take prisoners which cannot be done by the air and is very difficult for mechanization.

In order to explain how these missions are being performed by cavalry in Europe in recent wars, I cannot do better than quote from an article by Brig. Gen. Henry J. Reilly, who was an officer in our Regular Army from 1904 to 1918, and has been one of our most distinguished Reserve officers ever since. He is a well-known military author and a real soldier, has been in Europe recently and is qualified to interpret professionally what he has seen:

The recent German conquest of Poland was a campaign in which a good army of the 1918 type, backed by a relatively weak air force, went down to defeat before a 1939 type army, backed by an excellent and numerous air force.

The last year and a quarter of the Spanish Civil War, on the other hand, was one in which two armed forces, being not too unequal in strength and both possessing modern armaments, fought to a finish.

The author arrived in Spain in the spring of 1938 just as Franco's army cut the governmental forces in two by reaching the Mediterranean at Vinaroz and the mouth of the Ebro. He had been there for only a short time when he became convinced that all lessons of the Spanish Civil War were important for the American Army.

First, there was no continuous line of trenches stretching from one natural obstacle such as the Pyrenees to another such as the Straits of Gibraltar. The line along which the two armies faced each other was similar to the line along which the Northern and Southern armies faced each other in our Civil War. There were places in which each side was entrenched and large forces faced each other. There were others where there were lighter entrenchments lightly held. Everywhere there were long gaps in which no trenches of any kind existed.

Spain, like the United States, is a country of greatly varied terrain. There are wide plains cut by ravines and valleys, hills and mountains of all types, some wooded country, some subtropical country. The road system does not cover the country with a net work of good roads, as is true in France, Germany, and England, but like the road system of the United States, consists of a relatively small number of excellent main highways with branch roads often nothing more than wagon tracks. In the mountainous districts—and no part of Spain is far from one—the wagon tracks frequently become mere trails. The climate, like that of the United States, varies from the subtropical to northern, with bitter winters of low temperature, snow and fierce windstorms.

The consequence of the lack of a continuous line was that every force had two exposed flanks. The advantages of a flank attack could only be gained by troops which could move over the terrain, and move fast enough to get around and make a flank attack before being discovered.

The mechanized forces simply could not negotiate the terrain over which such flank movements practically always had to be made. The infantry divisions even though their heavy machine guns, trench mortars, ammunition, company kitchens and medical dressing stations were carried on pack mules, could and did go anywhere; but were never fast enough.

The only force which could do the job was cavalry, mounted on horses. The cavalry could negotiate the terrain which the mechanized forces could not get over, and could do so much faster than the infantry.

General Monasterio, who commanded Franco's cavalry, had definite ideas as to what cavalry should be. An old regular cavalry officer of the Spanish Army, always interested in horses, their breeding, training and care, he knew that, after all, the horse is only a means of carrying a soldier and his weapons.

The author's first visit was made when Monasterio's cavalry was occupying a large part of the loop of the Ebro River, the same territory in which the hard battle of Ebro was subsequently fought. His headquarters were at Gandesa, later the highwater mark of the Catalonian surprise attack across the Ebro. At the time of the author's visit, the cavalry was out—posting and patrolling the Ebro in the same way as the Union and Confederate cavalry often watched a river during the Civil War.

During this first visit, General Monasterio, as on subsequent occasions, expressed himself as strongly in favor of the American Cavalry methods of equipment, armament and combat. He said, amongst other things, that he wanted to arm his cavalry with automatic pistols, one for each soldier, as is only true in the Cavalry of the United States. Apparently, the only reason he had not succeeded in doing so was because, with the shortage of funds available for the armament of Franco's army and air force, only the most essential weapons could be bought. He emphasized the fact that frequently the opportunity exists for a wide and deep deployment and attack at the gallop in which the automatic pistol is the ideal weapon.

Monasterio insisted that the western front with its parallel trench systems had made too many officers forget that in the open soldiers are only human beings subject to the same demoralization and panic which throughout history have given opportunities to cavalry. Above all is this true when the cavalry attack comes as a surprise, or, when beaten troops are in retreat, worn down physically by the battle through which they have just passed and morally weakened by their defeat. Both the General and his officers recounted numerous examples of successful surprise in the long retreat of the Loyalists in that series of battles which began with the Battle of the Alhambra, and in which the governmental troops were driven from the Teruel-Saragossa-Huesca line to the Ebro and the Mediterranean. Captured batteries, tanks, machine guns, and motor transport figured in the booty. In the battles themselves the cavalry had never hesitated to dismount and fight on foot. In the pursuit where the cavalry met machine gun and artillery resistance too great to overcome, aviation, by bombing and dive attacks with machine guns, furnished them the necessary preparatory and accompanying fire.

Each visit to General Monasterio or talk with any of his officers strengthened this picture of a vigorously led cavalry seeking the weak points, the flanks, and the rear of the enemy determined to attack and knowing that its limitations would be augmented by the Spanish aviation and, when nearby, the Italian light mechanized and motorized troops. Talks at various times with Italian cavalry officers assigned for observation purposes to the Spanish Cavalry confirmed this picture.

Franco's resources were limited. In building up his armed forces he linked his efforts to the necessities. Franco had never been a cavalryman. Yet he steadily built up Monasterio's force from one consisting of but 5 squadrons in the beginning to one of more than 50 squadrons. Amid war, energy and money are not expended for such an expansion unless the benefits and dividends are apparent.

Spain simply proved once more the principle so often proven by warfare; no arm is independent of the others.

They are all part of the whole armed force of a nation. The children of the gas engines are not excepted from this rule. They are merely the youngest additions to the family. Each arm has powers and also limitations. The proper combination is that which arranges the whole so that the powers of each offset the limitations of the others.

What happened to the Polish Cavalry, far from being a proof that the days of horse cavalry are over, supports the lessons of Spain. In addition to the poor armament of the Polish cavalry soldier, Poland possessed no large mechanized units. She had only a small number of armored cars or light tanks to assign to the large cavalry units. Her cavalry lacked the antiaircraft and antitank guns necessary for protection against the German mechanized and aviation forces. Her aviation was so weak by comparison with that of Germany she virtually lost the use of it after the first 2 days. Thus, even had her individual cavalrymen had modern armament she lacked the mechanized and aviation forces needed to make good her cavalry limitations.

Judging from Spain, had Poland's cavalry possessed modern armament in every respect and been united in one big cavalry command with adequate mechanized forces included, and supported by adequate aviation, the German light and mechanized forces might have been defeated.

The present war between England and France on the one hand and Germany on the other has started as a stalemate. No military lessons whatever can be drawn from it at this time.

It is significant, however, that the Japanese, as a result of their operations in China, in spite of the increase in mechanization, have developed their horse cavalry and have established a more complete and extensive remount system in both Japan and Manchoukuo in order to raise more and better horses for war.

In spite of the unwise and ill-judged assault on the horse in war by many fanciful thinkers it is obvious that their deductions are founded on unsound conjectures and assumptions. They jump to the conclusion that because we have mechanized cavalry that it will exclude the horse cavalry. Nothing could be further from the truth because mechanized cavalry, although very valuable in increasing the scope of the entire cavalry, is in no wise suited to replace horse cavalry. Whereas horse cavalry can flow over all types of terrain and is not confined to the roads insofar as the horse elements are concerned, and can be supplied by air or pack, mechanized cavalry is going to be chained largely to the roads and will not be able to maneuver over a great part of the terrain which is found on this continent and in this hemisphere. It has not the flexibility of horse cavalry for each man on his horse, armed with his rifle and pistol, is an independent fighting unit. It must be remembered also that, although armored vehicles will shed lead bullets, they are just as susceptible of being pierced by armor-piercing projectiles as is the man with respect to the lead bullets of rifle and machine gun. No armored vehicle has been made or can be made that cannot be pierced by armor-piercing projectiles fired by guns which cost but a fraction of the price of the armored vehicle.

There is much conjecture also as to the relative fire power of mechanized and horse cavalry. While moving, mechanized vehicles, although heavily armed, cannot deliver any effective fire; they simply spray the landscape with unaimed bullets. When they stop to fire, they are highly vulnerable both to artillery fire and fire of antitank weapons. Only a fraction of their fire power could be placed on the ground. In this country and on this continent terrain is particularly suited for the use of horse cavalry. Mechanized cavalry is valuable and an important adjunct but is not the main part of the cavalry and cannot be. Our cavalry is not the medieval cavalry of popular imagination but is cavalry which is modernized and keeping pace with all developments. We are particularly fortunate in having great resources both in horses and motors. There are more than 10,000,000 horses in this country and motor industry is conceded to be the greatest in the world. Therefore we should not mistakenly ape the example of European nations who have different battlefields more adapted to mechanization and whose resources in animals and forage are such as to further restrict their use of the horse. Ours is an American problem.

As time goes on, there will be continued changes in our cavalry organization and there may be changes in the proportion of horse and mechanized cavalry based on honest and actual exercises. These should manifestly be of such a nature as to cover all large cavalry operations over wide terrain. Only then do we get the adequate answer and serve the best interests of national defense. Any unwise, unproved assumptions based on conjecture should be avoided. Our American cavalry modernized and partly mechanized is suitable to accomplish all cavalry missions.

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Second Mount for Officers

The House Military Affairs Committee has reported favorably on a bill which provides for the maintenance of two mounts for officers of the Regular Army who are designated as mounted officers.

General Herr, testifying before the committee in support of this measure, emphasized the advisability of such action on the grounds that it will encourage the more active officer to be well mounted. As the result of which the standard of equitation would be maintained on a higher and more uniform level throughout the army.

Brigadier General Ballantyne, 59th Cavalry Brigade, testified also and stressed the importance of this measure to the National Guard. By virtue of better mounted instructors with the Guard, resulting from this act, the standard of equitation and mounted work would be raised because the instructor would be enabled to own animals by which he could demonstrate better the nature of instruction given.

Expansion of the 7th Cavalry Brigade

The War Department has approved new tables of organization for the 7th Cavalry Brigade which, when effective, will materially increase its mobility and combat power.

The present brigade comprises a headquarters and headquarters troop, 2 mechanized Cavalry regiments each of 2 combat squadrons and 1 each, reconnaissance, machine gun, headquarters, and service troops. The new organization will also include a reconnaissance and support squadron comprising 1 each, reconnaissance, machine gun, and motorcycle troops, while to each of the Cavalry regiments will be added another combat car squadron.

These changes will increase the number of combat cars from 112 to 172. Although the new tables provide for an increase in personnel from 1,531 to 2,762, these additional men are not available at present.

On June 1, 1940, it is planned to activate the Reconnaissance Troop and Machine Gun Troop of the Reconnaissance and Support Squadron at reduced strength at Fort Knox, Kentucky, and to activate the 3rd Combat Car Squadron of the 1st Cavalry at The Cavalry School, Fort Riley, Kansas, where it will be utilized as a demonstration unit. The 3rd Squadron, 13th Cavalry, and the Motorcycle Troop of the Reconnaissance and Support Squadron of the expanded brigade will remain inactive for the time being.

The motorcycle troop is a new type of organization in the United States Army. One such unit has been organized in the 6th Cavalry and is now participating in the Third Army Maneuvers.

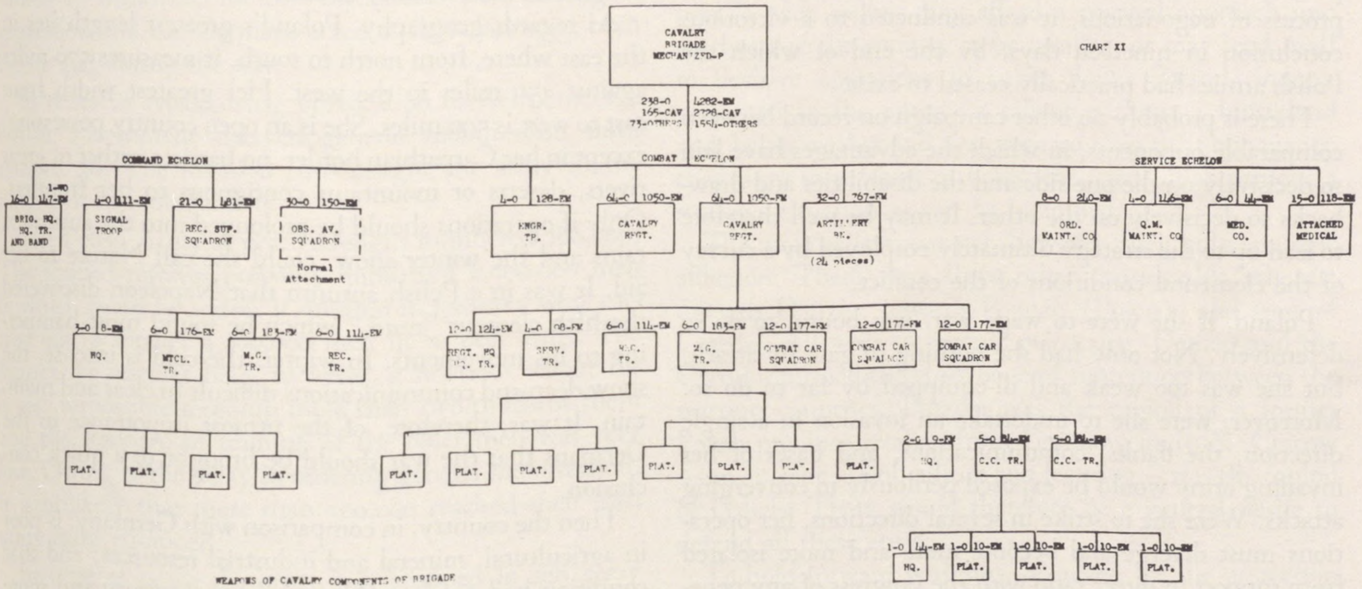

CHART XI

CAVALRY BRIGADE MECHANIZED-P
238-0 165-CAV 73-OTHERS
4282-EM 2728-CAV 1554-OTHERS
COMMAND ECHELON
COMBAT ECHELON
SERVICE ECHELON
16-0 1-WO 147-EM
BRIG. HQ. HQ. TR. AND BAND
4-0 111-EM
SIGNAL TROOP
21-0 481-EM
REC. SUP. SQUADRON
30-0 150-EM
OBS. AV. SQUADRON
Normal Attachment
4-0 128-EM
ENGR. TR.
64-0 1050-EM
CAVALRY REGT.
64-0 1050-EM
CAVALRY REGT.
32-0 767-EM
ARTILLERY BN.
(24 pieces)
8-0 240-EM
ORD. MAINT. CO.
4-0 116-EM
Q.M. MAINT. CO.
6-0 44-EM
MED. CO.
15-0 118-EM
ATTACHED MEDICAL
3-0 8-EM
HQ.
6-0 176-EM
MTCL. TR.
6-0 183-EM
M.G. TR.
6-0 114-EM
REC. TR.
12-0 124-EM
REGT. HQ HQ. TR.
4-0 98-EM
SERV. TR.
6-0 114-EM
M.C. TR.
6-0 183-EM
M.G. TR.
12-0 177-EM
COMBAT CAR SQUADRON
12-0 177-EM
COMBAT CAR SQUADRON
12-0 177-EM
COMBAT CAR SQUADRON
PLAT.
2-0 9-EM
HQ.
5-0 84-EM
C.C. TR.
5-0 84-EM
C.C. TR.
1-0 44-EM
HQ.
1-0 10-EM
PLAT.

WEAPONS OF CAVALRY COMPONENTS OF BRIGADE

Unit	Machine Gun Cal..30 Heavy	Machine Gun Cal..30 Light	Sub-Mach. Gun Cal..45	Machine Gun Cal..50	Rifle S-A	Pistol	Mortar 4.2"
Brigade Headquarters Troop....................		27	28	11	6	123	
Reconnaissance and Support Squadron..............	39	130	142	50	5	502	
2 Cavalry Regiments..............................	78	766	456	238	240	2228	12
Total	117	923	626	200	251	2853	12

COMBAT VEHICLES OF CAVALRY COMPONENTS

	Brigade Headquarters Troop	Two Cavalry Regiments	Reconnaissance and Support Squadron	Total
Scout Cars..................	8	116	50	204
Combat Cars..................	2	170		172
Mortar Mounts..............		12		12
Motorcycles;				
Solo...........	18	168	58	244
3 x P.........	5	48	42	95

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Lessons of a Blitz

At 5:45 A.M. on the 1st of September, 1939, five German armies and some hundreds of German aircraft began the destruction of Poland. At 11:40 A.M. the German Supreme Command issued this proclamation: "The armed forces have taken over the active protection of the Reich. In fulfilment of their task to offer resistance to Polish force, German troops have crossed all the frontiers to counterattack." The armies had been fully deployed, ready to strike, and after crossing the frontiers covered on an average eighteen miles a day, marching and fighting—a feat possible only where preparations for a most elaborate offensive have been made.

The campaign that followed will probably be cited as an example unparalleled in history of the success of a blitzkrieg waged against a weaker and less-prepared opponent. Initiated without declaration of war, during the process of negotiations, it was conducted to a victorious conclusion in nineteen days, by the end of which the Polish armies had practically ceased to exist.

There is probably no other campaign on record between comparable opponents, in which the advantages have lain so decisively on the one side and the disabilities and drawbacks so decisively on the other. It may be well therefore to lead up to the strategy ultimately employed by a survey of the elemental conditions of the conflict.

Poland, if she were to wage war, was bound to do so defensively. Not only had she nothing to gain by attack, but she was too weak and ill-equipped by far to do so. Moreover, were she to undertake an invasion in a single direction, the flanks, communications, and bases of her invading army would be exposed perilously to converging attacks. Were she to strike in several directions, her operations must diverge and become more and more isolated from support in direct ratio with the progress of any penetration they might achieve. No soldier would ever dream of perpetrating either of these follies notwithstanding the various invasions which, according to the German High Command, were to be executed into the territory of the Reich.

Poland had also to fight without direct military assistance from her allies. France and Britain were too distant to intervene effectively. At one period, indeed, it seemed possible that Russia would help her; but Stalin demanded as the price of his aid, the practical restitution of the Baltic provinces—a proposition which the Allies refused to consider. With the Russo-German pact of August 23, the implication was that Poland might be attacked along her eastern as well as her western border. When a country containing thirty-four millions is invaded by better armed nations on the one side of ninety millions and on the other of 180 millions, its resistance cannot long endure except in unusually favorable climatic and geographic conditions, here notably absent.

As regards geography, Poland's greatest length lies in the east where, from north to south, it measures 570 miles against 350 miles in the west. Her greatest width from east to west is 500 miles. She is an open country possessing, except in her Carpathian border, no barriers, either of great rivers, deserts or mountains contiguous to her frontiers. Only if operations should be prolonged into the autumnal rains and the winter snow, could she call Nature to her aid. It was in a Polish autumn that Napoleon discovered the fifth element "mud," which he found most hampering to his movements. In winter, the cold is intense, the snow deep and communications difficult to clear and maintain. It was, therefore, of the utmost importance to the Germans that the war should be brought to a quick conclusion.

Then the country, in comparison with Germany, is poor in agricultural, mineral and industrial resources; and that condition had not been improved by a century and more of unscrupulous exploitation by the Partition Powers. Hence, though Poland might be equal to feeding a large army, her factories could not furnish, nor did her exports enable her to purchase, the costly and intricate equipment required by modern forces or to fortify an extensive frontier. She had plenty of men and horses, but mere flesh and blood, protected neither by steel nor by military works of the first order, nor by natural obstacles, were unlikely long to withstand the onslaught of armored fighting vehicles launched in overwhelming numbers.

Poland has for long past been gradually transferring her main industries to the south especially to Sandomierz, Lublin and Lvov (Lemberg), partly in order to utilize her oilfields as a source of power, and partly to move them out of reach of German arms. Her hopes of immunity in this respect naturally received a severe blow from the Ger-

krieg

man occupation of Slovakia, which lay for some 200 miles along her southern frontier. And, as her own territories were invaded so soon afterward, she had no time to adjust her industries to the changed conditions before war was upon her.

Poland is a multi-national state containing 1,500,000 White Russians to the north and northeast; 7,000,000 Ukrainians to the south and southeast; 2,500,000 Jews scattered through the towns; and 750,000 Germans settled mainly in the west. These alien races were in general a source of weakness, for the Ukrainians were aiming at separation and the Germans acted as first-class spies both before and during the war.

In order to avoid giving provocation to Germany, the Polish government delayed general mobilization until August 30. The invasion thus caught the army in the middle of its mobilization.

The Polish Army at peace strength numbered 280,000. The trained reserves probably numbered 2,500,000 men to which could be added, if dilution in industry were carried out, a further 3,000,000 men fit to bear arms. The figures for reserves held, however, a fictitious value; for it was impossible to equip more than two-thirds of them and the standard of training of the older men was very low. Owing to the delay in ordering general mobilization, it is unlikely that more than 500,000 reached their own units fully equipped.

In time of peace the army was grouped in ten army corps, containing one cavalry division, twelve independent cavalry brigades, and thirty infantry divisions. There were also some battalions of mechanized or motorized troops, few of which, however, had modern equipment. There was a dangerous scarcity of antiaircraft and antitank guns.

The favorite arm had always been the cavalry, for the Pole is instinctively the *beau sabreur*. Great and glorious were the traditions—memories that never faded—with the result that, in 1939, the Pole still retained a great belief in the efficacy of the mounted arm—a belief that was bound to impose a heavy handicap upon an army opposed to an enemy equipped with an effective combination of mobility, armor and fire power.

The Polish air force contained some 1,100 machines, of which a few were high-powered craft of the finest quality. Some 400 others were fit for first-line duty. The rest to a varying degree were obsolescent.

The German war machine, on the other hand, was superlatively armed both on the ground and in the air, and it could draw on fully trained and equipped reserves to any extent likely to be required.

As to the strategic element, the Pole must suffer grievously from the drawback that the initiative lay with the intending aggressor. The Germans could choose the times and places for their thrusts, whereas the Poles, who could not of course afford to keep their army permanently mobilized, must await them in complete uncertainty. Moreover, whereas the weak state normally covers its front with fortifications in order to gain time to complete its preparations after being assailed, the Poles preferred, partly of course from motives of economy, to place their trust, not in walls or trenches but in the expectation of fluid operation, in which they hoped to achieve superiority through their splendid cavalry.

The shape of the frontier was also a grave disadvantage, the implications of which will be treated later. As this point we may note that racially and geographically, politically and strategically, Poland was in evil plight for the conduct of a great war.

A salient may be a source of strength or weakness. To an aggressor possessed of superior strength and readiness, a wide salient may afford a covered approach into the heart of the country to be assailed, or may lend itself to decisive operations to either flank. Poland, indeed, presented to the enemy a salient without a hinterland and, being weaker and less prepared than their opponents, they were thus, short of being encircled, in as perilous a strategic situation as can be imagined.

The main salient was not, however, their only strategic affliction. There were three other considerable salients; towards Danzig, towards Poznan (Posen), and west of Cracow. All were important politically; Danzig and the Corridor formed the chief bone of contention between the warring countries. Poznan was the capital of a former Polish province retaken from Germany in 1918. Cracow —an ancient site of culture and learning—was the capital of Galicia. There would therefore be a general desire to defend all these areas.

To hold forward positions, however, for the protection either of the main salient or of the lesser salients would be a dangerous procedure. For the defending troops would almost certainly be cut off unless they should be fortunate enough to elude their strategic difficulties by a tactical victory. The idea of the Polish High Command was no doubt to battle in retreat; but such strategy was not

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By Major General

H. ROWAN-ROBINSON

British Army, Retired

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feasible within a frontier so shaped and against an opponent overwhelmingly strong in the air, in fire power, and in collective mobility. Military considerations, namely abstention from engagement with superior converging forces, and the need of the defender, in a flat and featureless country, for a definite line such as a river on which to resist, demanded that a much more retired area should be occupied. That most favored lay along the Narev facing East Prussia and then along the Vistula from Warsaw to its junction with the San, whence it ran by the San to the fortress of Przemysl. There were advocates of a line a little further forward along the Narev, the Bzura, the Pilica, the Nida, and the Dunajec, and others of a line further back along the Narev and the Bug. The distances to be held along these positions were between 300 and 400 miles as compared to 1,100 miles along the frontier. The occupation of any of the three would have admitted not only a powerful and concentrated defense, but also of maneuver in counterattack on interior lines—a form of action quite impossible in the forward areas. Any line farther advanced was certain to be turned in the first few days of combat.

A general withdrawal or the initial occupation of a retired position would, however, have been open to the objection of surrendering without a blow territory prized both for political and economic reasons. The economy of the country was indeed wrapped up in the lower Vistula. And to abandon that river would seem to invite strangulation. Had not Frederick the Great (of accursed memory to the Pole) proclaimed that he who holds Danzig and the lower Vistula is more master of that country (Poland) than the king who rules over it?

Finally, it may be said that the temperament of the Pole—gallant, optimistic, obstinate—is such that action like abandonment of territory is intolerable to him. Thus, politically, economically and psychologically, it seemed likely that the forward position would be held.

But, if positions are to be held so that they may effectively cover treasured country, they must be garrisoned in strength. This would entail creating at least four big advanced groups, which, in the absence of fortified frontiers, would result in wide gaps and, in consequence, exposed flanks especially vulnerable in these days of mechanized forces. In the endeavor to close these gaps and to watch these flanks, there might be an attempt to cover every possible approach with a tendency on the one hand to concentration and on the other to dispersion—tendencies on which the ripest judgments might fail to find appropriate compromises.

A further objection to the forward dispositions is that the groups would be committed in advance to purely opportunist or purely negative action, to a defense based on no fortified zone, with the prospects, should they venture on counter-strokes, of committing themselves more deeply to the nets intended to ensnare them.

The choice of the Polish High Command was for the group system—a battle in retreat, with the idea of stopping and hitting, then clearing away skillfully and fast to stop and hit again, and so on. Those are tactics sound for the numerically weaker force, but only under the conditions, absent here, that it possesses better information and a higher mobility than the invader. Without those assets, it is likely to suffer overwhelming defeat before reaching positions selected for the decisive battle.

Had the forward troops been protected by demolitions on a truly extensive scale, they might have been able to maneuver successfully in retreat; for demolitions are a powerful strategic weapon particularly effective in the defense. It was commonly reported, indeed, that every bridge on every entry into Poland was mined. But, so far as the mines existed, there were two good reasons why they were not successfully exploded: the one, the rapid German advance, especially on the part of their mechanized forces; the other, that demolition strategy has a good record only in out-of-town games, the defender being always loth to destroy bridges in his native land and therefore often delaying until too late.

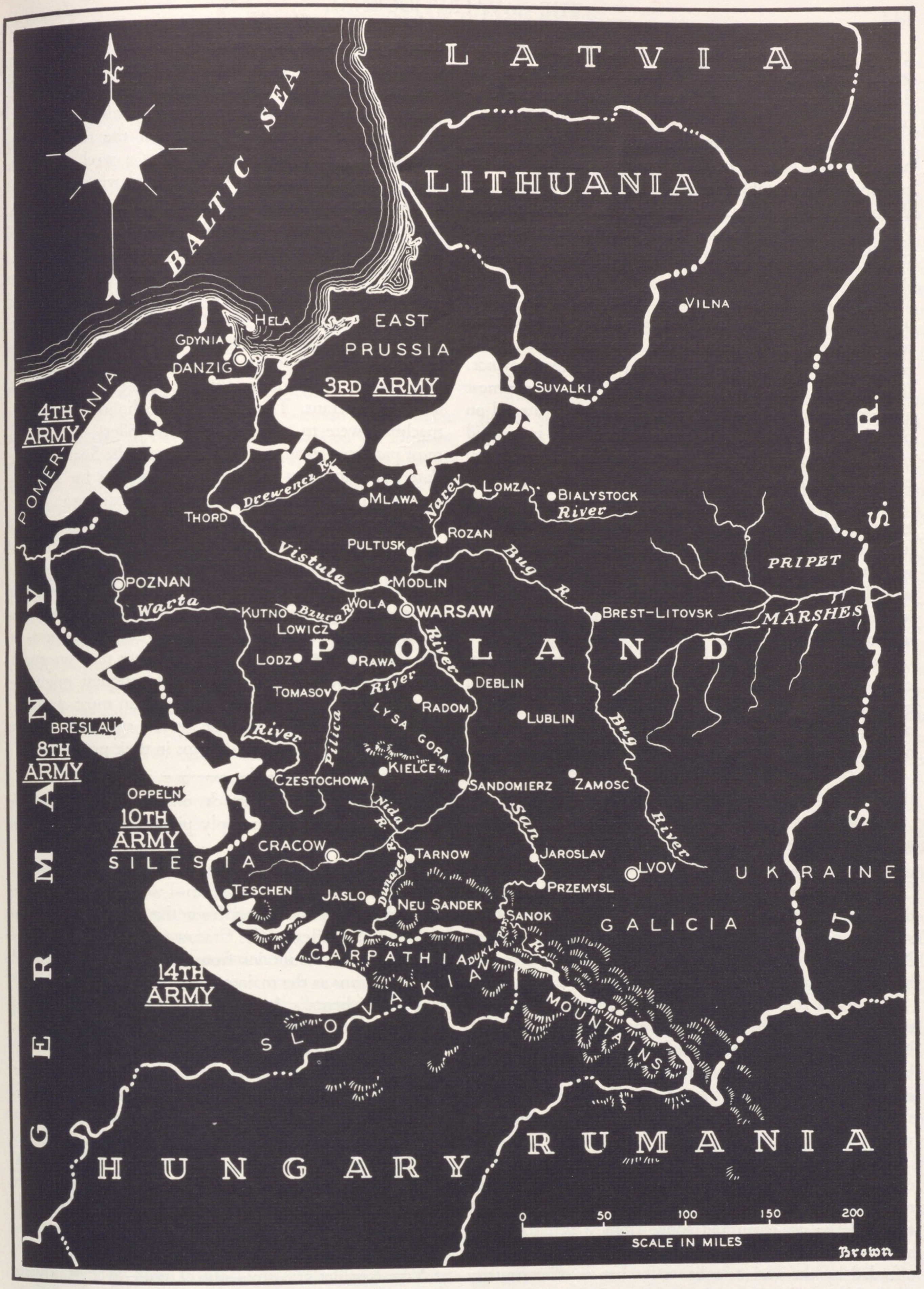
A scheme of thorough demolition in a semicircle west and northwest of Warsaw and centered on that town with a radius of one hundred miles might have proved most valuable. It was suggested, and it was feasible. But it was never put into effect.

There were probably soldiers who advocated holding the frontier by light, mobile detachments which would delay the enemy to the utmost and gain time for the preparation of positions in the interior. The main objection to this is that the detachments must present, for the discharge of their tasks, a combination of fire power, mobility, and protection at least as effective as any such combination brought against them. Otherwise they will be held in front, turned by the flanks, and quickly eliminated. The Polish light troops, largely cavalry, were immeasurably inferior in equipment to German mechanized forces.

What then is to be done where there is only one sound military course to pursue and, against its adoption, there are seemingly irrefutable political and economic objections? The answer is that an army destroyed involves in its fall the whole economy, administration, and government of a country and, therefore, where military and civil needs are diametrically opposed, and the first are vital, the civil needs, however weighty, must give way. There are, however, two difficulties inherent in this solution: first, opinions may vary as to what is vital; second, it is a counsel of perfection, but seldom likely to materialize in practice, except perhaps at the behest of some dictator who happens not only to wield supreme political authority but also enjoys a military prestige of the highest order.

Looking at the problem with Polish eyes prior to the outbreak of war, it was probable, therefore, if not certain, that the forward positions would be held and that the desire to guard territory would compel a disposition of the army somewhat on the following lines:

No. 1 Group on the line Lomza—Mlawa covering the approaches to Warsaw from East Prussia, whose frontier lay only seventy miles north of the Polish capital. This


LATVIA
BALTIC SEA
N
LITHUANIA
HELA
GDYNIA
DANZIG
EAST PRUSSIA
3RD ARMY
4TH ARMY
POMER-ANIA
VILNA
SUVALKI
Drewencz R.
MLAWA
Narev
LOMZA
BIALYSTOCK
River
THORD
PULTUSK
ROZAN
Vistula
Bug R.
PRIPET
MODLIN
POZNAN
Warta
KUTNO
Bzura R.
WOLA
WARSAW
BREST-LITOVSK
MARSHES
LOWICZ
POLAND
LODZ
RAWA
River
DEBLIN
TOMASOV
River
RADOM
LUBLIN
LYSA GORA
Pilica
KIELCE
BRESLAU
8TH ARMY
River
Bug
CZESTOCHOWA
SANDOMIERZ
ZAMOSC
OPPELN
Nida R.
San
River
10TH ARMY
CRACOW
TARNOW
JAROSLAV
SILESIA
LVOV
UKRAINE
TESCHEN
JASLO
Dunajec R.
NEU SANDEK
PRZEMYSL
SANOK
GALICIA
CARPATHIAN
DUKLA
R.
14TH ARMY
MOUNTAINS
SLOVAKIA
GERMANY
U. S. S. R.
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0
50
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SCALE IN MILES
Brown

THE POLISH CAMPAIGN

Fourteenth Army: List *Tenth Army: Von Reichenau*
Eighth Army: Blaskowitz *Fourth Army: Von Kluge*
Third Army: Von Kuchler

group, ignorant of the direction of the impending blow, would be widely dispersed. It must eventually be outflanked by troops advancing on Warsaw from the Corridor.

No. 2 Group in the Corridor astride the Vistula facing northeast and northwest. This group would be in a peculiarly uncomfortable position threatened by forces on the one flank from East Prussia and on the other from Pomerania. And the farther it might advance in response to political pressure, the more desperate would its situation become.

No. 3 Group in the province of Poznan. The military object of this group would be the covering of the main route between the capitals of the two belligerents. The political object would be the protection of the province. If in advance of the town of Poznan it would be in almost as precarious a position as No. 2 Group. Threatened on both flanks, it could hope to extricate itself only by a rapid retreat on Warsaw. It could not lend a hand to groups on either flank without opening up the Warsaw Road.

Nos. 2 and 3—the two largest and most important groups—would, if they engaged the advancing enemy, be lucky to escape annihilation. On the other hand, if they withdrew without fighting and were not overtaken, they would have gained no time, would have achieved no object, and in a necessarily hasty retreat might have suffered in morale.

No. 4 Group, covering the front Czestochowa—Cracow—Tarnow. This group would be much less exposed to envelopment than Nos. 2 and 3, and would have lines of retreat open to Lublin and Lvov should the hostile movements farther north against Warsaw prove successful.

No. 5 Group, small in size, watching the passes over the Carpathians towards Przemysl and Lvov.

No. 6 Group on the Russian frontier, also small in size and intended only for dealing with marauders.

No. 7 Group in reserve at Warsaw.

In actual fact this was the grouping, with strength in divisions, as far as can be ascertained: No. 1, five; No. 2, six; No. 3, ten; No. 4, five; No. 5, three; No. 6, three; No. 7, doubtful. There was cavalry mainly in the gaps between the groups and covering the extreme right flank.

Against a combined assault by Russia and Germany, the distribution of the Polish forces need not be considered. Not the most skillful dispositions, not the most heroic bravery would avail to save them from early and complete defeat.

Surely no army in history ever embarked on a campaign with more melancholy prospects.

In striking contrast to her adversary, Germany enjoyed exceptional advantages which enabled her to carry out a true blitzkrieg. In the first place, she benefited of course from all the ills recounted above from which the Poles suffered. Peculiarly to her liking were the opportunities afforded by the various salients for her favorite strategy of double envelopment. In the second place, she must have profited greatly by her recent experiences in deploying large forces for aggression first against Austria and then against Czechoslovakia. The vast scale of those operations, undertaken with the full intention of crushing resistance, must have enabled her to discover and remedy many of the faults of her military machine. Moreover, the rallies at Nuremberg partook of the nature of an annual mobilization. Every day for a week, Nazis or regular troops numbering over 100,000 were transported to and evacuated from that sacred city. In all these operations, the German staffs were perfecting themselves in the thorny logistics of mechanized movement.

Then the Germans had exploited the Spanish civil war as an inexpensive field of experiment in weapons and methods of fighting. The Condor Legion, for instance, under von Richthofen—one of the first formations to be engaged on the Silesian frontier—had battled for two years in the Peninsula and could be regarded as a corps of expert veterans. The airmen, too, who in their superior machines were to engage the Polish pilots, had for the most part been given tours of service on the Spanish front. Rarely has an army had such opportunities for attaining proficiency just before entering upon a major war.

To these and the more obvious advantages, must of course be added those of the initiative, with its choice of times and places for the initial strokes. The Pole, however, undaunted by the terrible odds against him, took up the challenge, thus to render an immense service to the western democracies. For with the first clash of arms on the Polish border, the democracies were now on guard; and, short though the campaign of conquest might be, precious months of summer and autumn must elapse—a delay which would afford the British and French forces time to fill many of the wide gaps in their preparations.

The German plan of attack, omitting aerial operations for the moment, was to apply pincers strategy with two army groups:

The Southern Army Group, consisting of three armies:

List's Army—the Fourteenth—which was to operate from the Carpathians and from the Teschen salient, to occupy Polish Silesia, take Cracow, and wheel to the right parallel to the mountains from which it would dispatch other columns as the main column moved east.

Von Reichenau's Army—the Tenth—which, starting from the area about Oppeln, was to seize Czestochowa and move on Warsaw.

Blaskowitz's Army—the Eighth—which was to start from the region east and north of Breslau, was to guard von Reichenau's left and to watch, but at the outset not seriously engage, the Poznan Group.

The Northern Army Group, consisting of two armies:

Von Kluge's Army — the Fourth — operating from Pomerania with the initial object of occupying the Corridor in conjunction with the Third Army and destroying the Polish Group in it.

Von Küchler's Army—the Third—in East Prussia, part of which was to coöperate with von Kluge while the main body, starting somewhat later, was to furnish the northern arm of the pincers.

As to the composition of the armies, von Kluge's Army seems to have contained about fifteen divisions and the other German armies eight or nine. Eight to ten of the total were mechanized or motorized. List also used some Slovakian troops, mainly on his line of communications.

Pincers strategy was to be applied not only by army groups but also by armies. Thus von Kluge and von Küchler, from west and east, were to envelop the Polish Group in the Corridor; and von Kluge and Blaskowitz, from north and south, were to deal similarly with the Poznan Group. There was one striking difference, however, between the two operations. In the first, the stroke was to be immediate, eliminating the Corridor Group at once. In the second, the stroke was to be retarded and the Poles encouraged to stand their ground until their communications with the capital had been severed.

After crossing the frontier, the German armies made rapid progress. By September 7 List was on the Dunajec at Neu Sandek and Tarnow, with his left at the south edge of the Lysa Gora. Reichenau had captured Czestochowa and Kielce, driving several Polish divisions into the Lysa Gora. Among his booty was a copy of the Polish plan of campaign, a study of which by the German High Command facilitated the solution of many of its problems and gave confidence and added speed to the further advance. Blaskowitz had forced the passage of the Warta and lay on a wide front with his right near Lodz. The Fourth Army and part of the Third had crushed the Corridor Group between them and had driven parts of it towards the Poznan Group and the rest up the Vistula towards Modlin. They were now on the Drewencz from Thord upwards. Two other columns of the Third Army, starting on the 4th, had pierced the line of the Narev at Pultusk and Rozan, and were moving on to the Bug. A few minor Polish cavalry raids into Germany had been repulsed.

The most important results of this, the first week of the campaign, were, in the south, the occupation of the rich industrial area of Polish Silesia and of Cracow; in the center, the close approach to Warsaw of the Tenth and Eighth Armies and the isolation of the Polish Poznan Group, whose communications were now dangerously threatened by the Eighth and Fourth Armies; and, in the north, the elimination of the Corridor Group and the turning of the line of the Vistula by the Third Army.

We may now hark back to the opening operations and deal with aerial action. The primary objective of the German air force was ascendancy in the air, to be achieved in the first instance through the bombardment of enemy airdromes. Its attack was completely successful. The Polish squadrons, surprised by an invasion made without declaration of war, were for the most part on the ground. Their airdromes, accurately plotted on German maps, fell an easy prey to the hostile air fleet. Heavy casualties were inflicted on men, matériel, and ground organizations and the airdromes themselves were largely made useless by bomb craters.

On the first day, Polish headquarters reported that Warsaw and some thirty other towns had been bombed with serious loss to their inhabitants. But it would seem that the German pilots to begin with devoted their attention to military objectives and that the casualties suffered by civilians were incidental to what, hateful though it may be, is normal aerial action.

Within five days the Polish air force had practically ceased to exist. Some thirty of their machines, indeed, flew over Berlin and, on at least two occasions their airmen inflicted heavy casualties on mechanized columns. Moreover, the Polish pilots won a number of victories in single combat. These incidents were, however, few and far between. But after the fifth day Germany was in complete command of the air, to the immense advantage of her armies.

While destroying the opposing air force, the German airmen also attacked the Polish communications by road, rail, wire, and wireless, and the headquarters of the government and the army. The Polish authorities, civil and military, were driven from Warsaw on the 6th and then relentlessly pursued from locality to locality until, on September 18, they were forced into Rumania. Spies were so effective an aid in this connection that, within two hours of each change of location, the Russian wireless would announce the new address to which bombers should be dispatched.

Road and railway centers, trains, main bridges, radio stations, aqueducts, power stations, depots, assembly points for reserves, were all assailed. Bombs pursued the authorities who should issue orders; bombs exploded on the channels by which those orders should be conveyed. In the midst of a belated mobilization, the reservist was without instructions as to his destination or, if that were known to him, without means of reaching it. The commanders at the front were out of touch with Polish GHQ and were short both of the drafts which should have completed their units and of their requirements in ammunition and supplies.

The German airmen enjoyed the signal benefit which naturally grew greater with the advance of their armies, of short ranges to their objectives, a benefit which enabled each machine to make several bombing trips in a single day.

With a view to sabotage, a number of Germans were dropped by parachute. Most of them were, however, either shot in the air or killed or captured on landing. Curiously enough, some of them appear to have been dropped over big towns in broad daylight where they could not hope to escape observation.

We must now return to the doings of the armies which we left on September 7.

September 8 was an important day. List, advancing on a front of 100 miles, reached with his left Sandomierz—the Polish arsenal—and with his right, somewhat refused, the oil wells at Jaslo. On that day he extended his front by a fresh column which he sent forward through the Dukla Pass and which, on the 10th captured Sanok, thereby turning the line of the San. On the 11th he was everywhere across the San, and his left column, wheeling north marched down the Vistula.

Meanwhile, Reichemau's right wing advancing from Kielce experienced fierce resistance in the Lysa Gora where the hills rise to some two thousand feet. He was able, however, the country being open, to make great use of his aircraft and also to rush a mechanized division round the hills to take the enemy in reverse while List's column from Sandomierz threatened him from the east. The Poles, attacked in overwhelming force from front, rear, one flank, and the air, were compelled to retreat on Radom. Reichenau's center and left were now north of Rawa and, on the 8th, one of his mechanized divisions reached the Vistula thirty miles southeast of Warsaw.

On the left of the Tenth Army, Blaskowitz was engaged in a dramatic conflict. In the execution of his dual task, his various divisions were scattered over a front of two hundred miles. To the front, his armored cars reached Wola—a suburb of Warsaw. His right and center took Lodz and moved towards the line Lowicz—Kutno. His left was engaged in a fierce battle with the southern flank of the Poznan Group which, starting back on the 7th, was now in full retreat making for Warsaw through the gap between the Warta and the Vistula. Here a tremendous struggle raged for eleven days while the Poles, including many who had been driven in front of the Eighth and Tenth Armies, were gradually forced into a rectangle some fifty miles long, of which the southern and eastern sides were formed by the Bzura from Kutno through Lowicz to its junction with the Vistula, and the northern side by the Vistula itself. Parts of the Tenth and Eighth Armies, which had reached the outskirts of Warsaw, turned back from the capital to line the Bzura to the east, and thus directly block the Polish retreat. Von Kluge's whole army struck in from the west and north and completed the encirclement. The Poles were driven into an ever-narrowing compass. They made fierce efforts to break through to the east and southeast. But, held everywhere by an impenetrable fence of machine guns, they were compelled on the 19th to lay down their arms to the number of some 200,000 men. A few thousand troopers, survivors of a last desperate sortie, managed to reach Warsaw, carrying with them a thousand German prisoners and thirteen captured guns.

Away to the southeast, the Polish group of four or five divisions, which had fallen back from the Lysa Gora to Radom, was attacked there by mechanized formations and later by the inner flanks of the Fourteenth and Tenth Armies. It endeavored to pass the Vistula at Deblin, but found the passage barred by a German column which had made a rapid parallel pursuit. On September 17 it was obliged to surrender.

In the meantime, the Third Army, part of which was taking part in the struggle for Kutno, had initiated investment of the fortress of Modlin with one column while two others passed the Bug, and succeeded in isolating Warsaw on the north and east. Away to the northeast, three fresh columns debouched from East Prussia, one of which passed the Narev at Lomza on the 11th, captured Brest-Litovsk on the 16th, and established contact on the 17th with List's left which had come up from Lublin, which it had just captured. The arms of the pincers from north and south were now closed.

We may now turn back to the southern army. When List sent most of his left towards Lublin, he dispatched one column of it from Sandomierz to join in an encircling movement against a Polish group attempting to escape northeast from Jaroslav. He sent at the same time three divisions of his left center through Jaroslav, which he captured on the 10th, towards Tomasov. These troops succeeded in heading off the Poles and driving them into the column from Sandomierz which had reached Zamosc. There again, superior equipment proved decisive, and 60,000 men with 130 guns were forced to lay down their arms. On the 16th, List's right, in spite of a reverse on the previous day, captured the fortress of Przemysl and on the 19th severed all communication with Rumania.

Thus by September 19, the German armies overrunning the country had reached a line running from the Rumanian frontier, past Lvov on the west, thence north to the Bug, along that river to Brest-Litovsk and on to Bialystock and Suvalki. There were nevertheless a number of Polish divisions still uncaptured, some of which, had it not been for the Russian invasion, would probably have united and prolonged resistance in the Pripet marshes, thereby compelling Germany to maintain a considerable garrison in Poland.

We may now revert to the operations around Warsaw. Although, on the 19th the Polish armies had ceased to exist and Gdynia had fallen, the Capital, the Fortress of Modlin, Lvov, and the little port of Hela still offered resistance.

Modlin, it will be remembered, was reached by troops of the Third Army as early as September 6. Owing, however, to the strong resistance offered by the Poles along the connection with Warsaw by the Vistula, it was not completely isolated from the capital until the 21st.

On the 16th, the Germans demanded the surrender of Warsaw; but General Czuma, the commander of the garrison, refused to receive the parlementaire, or even the written message. German aircraft then dropped leaflets over the town demanding its surrender within twelve hours and stating that, should the demand not be accepted, Polish inhabitants would be allowed a further twelve hours in which to quit. Then Warsaw was to be treated as a war area; shelled by guns and bombed by aircraft. The Germans make the claim (which the Poles dispute), that, not before the 25th when their patience was exhausted by Czuma's obstinacy, was their fire turned from purely military objectives onto the town itself. On that day, they entered two of the outer suburbs and, two days later, captured part of the inner ring of forts (if Warsaw can seriously be said to possess forts).

That was the beginning of the end. On the 28th, only after the Polish field army had long ceased to exist, when the capital lay largely in ruins, when starvation was rife, and when the aqueducts and the power stations were destroyed, did the garrison surrender. The defense of the capital was worthy of the Polish tradition but from September 19 it ceased to have any considerable military value. On the other hand, a lengthy defense of Warsaw, knot as it was of many communications, would have been of immense value to an "army in being" fighting on the Bug or based on the Pripet marshes.

According to a German report, out of 17,000 buildings in Warsaw, 13,000 were demolished or burned. Simultaneously with Warsaw, Modlin, garrisoned by 30,000 men, also surrendered. Lvov had fallen on the 22d, and, last of all, on October 2, Hela, the little port north of Danzig, capitulated with 4,000 men.

The campaign on the ground being ended, we may now return to the doings of the dominant air force. The German mind works with ruthless logic. What was the most profitable employment of aircraft—bombardment of towns to break the civil will to resist, or the attack of military objectives? There were no congregations of humans in Poland so dense that their bombing was likely to prove decisive. The Germans had, moreover, no desire to damage industrial areas, as they wished to acquire them for their own purposes. On the other hand, the attack of military objectives—the enemy's headquarters, air force, and communications—which had been located and were easily attainable, might well lead to their early defeat. Once, however, these aims had been achieved, that part of the German air force not directly assisting the army seems to have been directed to the destruction of civilians, with a view no doubt to finishing the campaign before the advent of unfavorable weather.

It is admittedly difficult to distinguish between military and non-military objectives. Bridges and railways, important features of lines of communication, are usually in large towns. Again, a city such as Warsaw, which definitely accepts siege, may legitimately be bombed and shelled after due warning. But towns and villages of no military importance were bombed, and hapless refugees attacked with machine guns from the air by pilots flying low to the ground.

The Germans seem to have employed between 2,000 and 3,000 machines of which perhaps two-thirds were bombers. Apart from the indirect support which they afforded to the army by the elimination of the opposing air force, by reconnaissance and by the destruction of enemy communications, they gave valuable direct support to the other arms in battle by raining bombs and bullets on whatever was at the moment holding up the advance of the tanks and infantry, concentrating their fire on centers of resistance and breaking up counterattacks before they were fully developed. They naturally found wonderful targets in an army containing a large proportion of cavalry and supplied mainly by horsed transport.

It cannot be said that the German air force played the decisive rôle, for alone it could not have brought the war to a conclusion. But in the execution both of its strategic and tactical tasks, both on its independent missions and when combined with the army on the field of battle, it exercised an influence difficult to overestimate, and was largely responsible for the swiftness and completeness of the victory achieved.

German Strategy

The German High Command may be awarded the palm for its strategy. It found indeed no unexpected obstacles to conquer, and it met with none of the vicissitudes of fortune ordinarily encountered in war, except that the armies were able to move more rapidly than anticipated owing to perfect weather and to the fact that the rivers—the one defense of Poland in the summer—were at levels lower than any previously recorded, and thus could often be crossed without bridging, by forces both mechanized and afoot.

As expected, the Germans applied pincers strategy in the great salient and in all three minor salients. They began with the Corridor and Teschen salients. These taken, the Third Army launched its main columns towards Warsaw with intent both to turn the line of the Vistula and, in combination with the Eighth and Tenth Armies, to bite inwards on Warsaw. A week later, again timing the operation with remarkable accuracy, it widened the scope of the pincers, launching a column through Lomza towards Brest-Litovsk in order to turn the line of the Bug, whilst List, sending a column through the Dukla Pass to turn the line of the San, wheeled north with his left to meet the troops from East Prussia.

The most artistic stroke, however, was that which gathered the whole of the Poznan group into the Kutno net. Just enough pressure appears to have been exerted on its front by the inner flanks of the Northern and Southern Army Groups to keep it interested but not anxious; and so it was persuaded to retain its forward location until the net was ready. Its commander was of course heavily handicapped by the severence of communications, by the departure of GHQ from Warsaw and by the early subjection of the Polish air force.

It is to be noted that the Germans refused to be attracted by the lure of Warsaw until they had completed the defeat of the hostile armies. They might have invested it much earlier than they did; but they preferred in the first place to deal decisively with the hostile armies at Kutno, Radom, and Zamosc.

Mobility played the usual preponderant part. The German infantry, marching and fighting, covered eighteen miles a day for the greater part of the campaign—a feat due to good leadership and staff work, to the foot soldier's endurance and to his immunity from air attack. The result was that the Pole once beaten was kept ever on the move.

The employment by the Germans of mechanized and motorized forces is interesting. They appear to have undertaken with them no far-reaching independent operations. Often for a particular purpose, such as surrounding the Poles at Radom and Czestochowa, they might be dispatched say forty miles, ahead of the marching divisions. But, having accomplished a specific task, they would then either rejoin the infantry or await its arrival, before bounding on to fresh adventure. That is to say, the army commanders kept them firmly on a leash, which though elastic was strong, and ensured that they were always present when decisive actions had to be fought.

Nevertheless, in spite of being denied long-range strokes, their supply presented grave difficulties. So much so, that in the fighting around Lodz the Poles captured 100 tanks immobilized owing to lack of gasoline. And at the close of the campaign, three armored divisions far to the east of Warsaw were brought to a complete and lengthy halt from the same cause. Had it not been for the Russian invasion, they might all have fallen a prey to roaming Polish formations.

Some of the success of the German armored forces may be attributed to the assignment of engineers to every mechanized unit and formation. These troops and the pioneers of the infantry received special training in the art of making smooth the path of the tank by the removal of obstacles and mines and the quick laying of bridges.

A new feature of the mechanized army was the radio propaganda truck which accompanied the columns and issued cheering news to the Germans and disheartening news to the Poles telling the latter repeatedly of their defeats and that they had been shamefully betrayed both by their own government and by the French and British governments.

Owing to the immense disparity, both in numbers and equipment between the adversaries, no real light was thrown in the campaign on the central problem of modern war: namely, how to advance without disproportionate, if not disastrous, losses against a defensive which has of late years been greatly strengthened. In 1918, the combination of tanks with fire from surveyed gun positions proved sufficient to overcome the holding power of machine guns. Since those days, however, the power of artillery does not seem to have made an advance comparable to that effected in the domain of fortification. Moreover, figures of machine guns have been trebled. And now, forming part of the normal equipment of a modern corps, antitank guns by the hundred and antitank mines by the tens of thousands have been introduced and are thought to have greatly curtailed the penetrative properties of the tank member of the successful combine of 1918. Naturally, the powers of attack, striving ever to master the defense, have also been enlarged in a variety of ways, so that a struggle between evenly matched opponents would have been interesting and instructive. Unfortunately, the many weaknesses, already described, of the Polish defense, especially in aircraft and antitank equipment, rendered the struggle a foregone conclusion.

The favorite German strategy of double envelopment, leads to concentration at the decisive point only if it is applied to an opponent suffering from indifferent leadership, lack of mobility, or poverty of communications. Had the Poles been ordered to withdraw early and had they possessed the means of rapid transport, they might have retired to the various river lines while successive pincers were biting upon thin air. It would be incorrect, however, to suggest that, for this reason, the strategy of the Germans was faulty and independent of fortune. Their high command knew that the Poles lacked mobility owing to their dependence on horsed transport, and by bombing Polish GHQ and destroying communications they made as certain as is humanly possible that the pincers would in fact bite on something substantial. Moreover, the strategy of envelopment, even if it should fail in its preliminary strokes, was almost bound, in the absence of a Polish hinterland, to be successful in eventually concentrating the German Army in a favorable position either for attack or for pinning the Poles to the Pripet marshes.

Security of the marching columns appears to have been entrusted to the protection afforded firstly by the deep and wide reconnaissances of aircraft and armored cars; secondly, by the general convergence of movement; thirdly, by the forward positions of mechanized forces; and fourthly, by the strong and tactically complete motorized reconnaissance battalions which formed part of each corps.

The Germans were clearly surprised themselves at the rapidity and completeness of their victory. On September 3, Hitler proclaimed that the "battle in the east will have reached its successful conclusion in a few months," and, on the 11th, the German communique uttered the warning that "the German people must understand that our troops cannot be expected to maintain the surprising speed of their advance."

Nevertheless, they were always ready to draw full profit from success however great and however unexpected, and that is a quality of leadership and training of inestimable value.

The German army and air force seem to have acted in closest combination under a single will. Nothing could have been more advantageous to the army than the liquidation of the Polish air force and the destruction of the Polish communications. But, those independent tasks once fulfilled, the air force had to devote most of its powers to the direct and close support of the army. It is indeed difficult to see how an army and an air force can produce full value except under a single direction; still less, how a navy, an army, and an air force can operate effectively in separate compartments. Germany has many faults, but she examines military problems with a single eye to efficiency, which she will allow no vested interests to impair.

German Tactics

In a blitzkrieg, with the rapid surge of events, the eyes of onlookers are concentrated rather on strategy than on tactics. The daily communique proclaimed the nature of the former. As to the latter, the victim has been to a great extent silenced; and it is contrary to reasonable expectation that the victor, about to be embroiled in another struggle, should divulge any of the secrets of his success that he could possibly withhold from the world.

The student is, therefore, forced to make deductions from an accumulation of hearsay, from the prevailing conditions of battle, from the organization, equipment, and current doctrines of the opposing armies and from the close connection between tactics and strategy imminent in rapid and triumphal progress.

So far as these slender sources are reliable, it appears—

(1) That the infantry attacked—much as in 1918—in great depth with unlimited objectives of which the first would be the destruction of the hostile artillery; that it was afforded full support, where necessary and available, from every kind of covering weapon—airplane, gun, tank, mortar, heavy machine gun; but that every subunit, however small, was expected to advance if necessary under its own fire, were it only that of the light machine guns and the platoon mortar. That the enemy's resistance was disintegrated by infiltration when occasion demanded. That touch was kept rather with the enemy than with friendly troops on the flanks, without thought of relief until relieved. That delay was considered more blameworthy than second-best action. That command was widely decentralized to admit of the initiative of junior subordinates. That pursuit was conducted with "audacity and brutality" up to the peak of endurance.

(2) That, where the enemy appeared to be very strongly posted, direct assault was usually avoided until it was clear that pressure on the flanks exercised either by mechanized units of the attacking formations or by other formations, was becoming operative. That, at times, if the Germans did not like the look of a position, they sidestepped and attacked elsewhere — a procedure hardly feasible unless the enemy has lost the power of counterattack.

(3) That the Germans probably employed the majority of their four fast motorized divisions and six armored *(panzer)* divisions, distributed among the various armies, as the spearheads of attack; and with these aided only by combat aircraft, often broke the resistance of an enemy inadequately equipped to deal with such assailants, thus enabling the following infantry to cover great distances unimpeded by the need of fighting.

(4) That the tank advance was made by bounds, each bound being limited to the distance required to keep penetration open. Even so, it was clear that given an adequate supply system and a superiority in mechanized forces after effecting a break, penetration can be exploited much more effectively and rapidly than was the case in 1918.

(5) That, General Guderian, Chief of the German mechanized forces, having recently proclaimed "that antitank defense being now so powerful the primary rôle of tanks is not to put the enemy's infantry and machine guns out of action, but rather to silence his antitank weapons, overcome tank obstacles, and then destroy his artillery and tank reserves, and that only when these tasks are accomplished, are tanks using their rear echelons, to devote their attention to mopping up the zone occupied by the infantry," it is probable that the panzer divisions, which contain a liberal number of supporting weapons of their own, endeavored in many cases not only to breach, but to make a complete penetration of the enemy position.

This procedure differs from that commonly recommended in other modern armies. It possesses the great advantage, where it is successful, of anticipating enemy attempts to bring up reserves and fill the gaps created by the initial attack. The action in depth would naturally be followed by action to the flanks intended to widen the breach. No method is, however, free from dangers. The infantry under attack may go to earth and pop up again to deal with the opposing infantry as soon as the armored divisions have passed on. Moreover, the latter, without the gun and machine-gun support with which they started, might easily run into field and antitank guns, distributed in depth and undiscovered, and suffer heavy casualties from them.

(6) That where such action appeared unduly to endanger infantry or where panzer divisions were not available, tank units (on the lines of our battalions of I-tanks) outside the composition of mechanized formations, accompanied the infantry, the joint advance being covered by artillery and by aircraft, the latter often dropping large numbers of small bombs in enfilade of the trenches.

(7) That motorcyclists, shielded to the front from machine-gun fire, moving rapidly in dispersed formation and thus affording difficult targets to other forms of fire, were employed for the attack of antitank guns.

(8) That supporting artillery could but seldom have found the time to adopt survey methods but must have ordinarily been ranged by direct observation, ground or air. That quick opening of fire was considered of more importance than accuracy.

(9) That the problem of covering the last 300 yards, in which the fire of supporting machine guns has to cease and that the artillery to lift, was solved largely by the use of the platoon mortar and by the platoon of six 3-inch mortars in the machine-gun company of the battalion.

(10) That the tactics employed in the First World War by von François, for instance, at Tannenberg and by the British in the last phase of the campaign in Mesopotamia, of placing the immense strength of the defensive weapons at the service of offensive strategy, were repeated on a vast scale at Radom, Kutno, and Zamosc, thanks largely to the successful use of engined forces, and are likely to find further repetition wherever open warfare prevails.

The Germans achieved their victories under the most favorable auspices, namely, a superior preparation, surprise for their aircraft, perfect climate and terrain for their mechanized forces and a great scarcity of hostile weapons capable of countering the armaments in which their superiority chiefly lay. It is unlikely that such conditions will recur either in their entirety or in the immediate future. Rather, it seems that the rapid movement of armies will be replaced by a period of stalemate. Nevertheless, that period will have a limit. It is as certain as anything can be in war that attack will in due course conquer defense in spite of elaborate fortifications. Brains are working ceaselessly at solving the problem just as they were in 1915; and, as a result of their labors, we may see monster tanks or stupendous mines or strange gases, or perhaps some entirely new development of warfare. For years, it has been proclaimed that the defense is invincible; yet, in succession, we have seen the assailant win through in Abyssinia, in China, in Spain, in Poland, in Finland, under a great variety of circumstances. In none of these countries, indeed, were the opponents equally matched in numbers and equipment as they are at the moment in western Europe, nor were they for the most part fully provided with modern armaments. The final test of defense lies therefore still ahead. Should it be successfully pierced, open warfare may be renewed and then some of the lessons learned in Poland may find a useful application.

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"Calling the Turn"

"One night the doors of aeroplane hangars and army garages will be flung back, motors will be tuned up, and squadrons will swing into movement. The first sudden blow may capture important industrial and raw-material districts or destroy them by air attack so that they can take no part in war producton. Enemy governmental and military centres may be crippled and his transport system disorganized. In any case, the first strategic surprise attack will penetrate more or less deep into enemy territory according to the distances to be covered and the amount of resistance met with.

"The first wave of air and mechanized attack will be followed up by Motorized Infantry Divisions. They will be carried to the verge of the occupied territory and hold it, thereby freeing the mobile units for another blow. In the meantime the attacker will be raising a mass army. He has the choice of territory and time for his next big blow, and he will then bring up the weapons intended for breaking down all resistance and bursting through the enemy lines. He will do his best to launch the great blow suddenly so as to take the enemy by surprise, rapidly concentrating his mobile troops and hurling his air force at the enemy. The Armoured Divisions will no longer stop when the first objectives have been reached; on the contrary, utilizing their speed and their radius of action to the full they will do their utmost to complete the breakthrough into the enemy lines of communication. Blow after blow will be launched ceaselessly in order to roll up the enemy front and carry the attack as far as possible into enemy territory. The air force will attack the enemy reserves and prevent their intervention."

—General Guderian, Commander-in-Chief of the German Armoured Divisions in *Militarwissenschaftliche Rundschaw,* December, 1935.

Magnificent—But It Wasn't War

By Cary Ingram Crockett*

(Editor's Note: The charge of The Light Brigade has been sung in poem and verse. It is now an epic. Its theme has confused the lay mind for almost a century.

The reading of this article should appeal, particularly, to the military reader during current days. We are attempting to maintain a high tempo in all of our affairs in the tactical handling of troops. Under such conditions is there a tendency to rate the pace of events to the point where proper reconnaissance is disregarded and orders issued in hasty fashion which may lead to confusion through lack of clarity? Balaklava resulted from just such a set of circumstances.)

The group of brilliantly uniformed officers galloped to the edge of the plateau and dismounted. Lord Raglan, commanding the British forces in the Crimea, moved close to the brink of the escarpment and peered anxiously through the mist toward the pale light of the morning sun.

October 25, 1854, had begun cold and lowering but the clouds were lifting and other signs portended a good day for fighting.

The British commander stood on the western rise of a bowl-shaped depression several miles in diameter. No better place could be found for observation to the eastward. Every detail in the foreground on the bare plain nearly seven hundred feet below stood out distinctly and visibility at longer distances was rapidly improving.

A ridge trending east and west across the plain and the two roughly parallel shallow valleys thus formed in the bottom of the basin, were familiar features. As named by the soldiers they were North Valley, Causeway Heights and South Valley.

The post road between the camp before Sebastopol and the base at Balaklava, after curving down from the plateau, followed the crest of Causeway Heights to a crossroads two miles to the east, then turned abruptly and led southward down to the port. It was the only road practicable for the transportation of supplies and munitions in bulk.

For protection of the base and supply route Causeway Heights had been fortified. There were six redoubts, numbered from east to west. They were defended by Turkish Contingents and their armament included a few naval guns taken from the fleet. At the moment the observers on the plateau could see movements indicative of excitement or alarm among the occupants of redoubts number 1 and 2.

To the southwest the glint of sunlight on bayonets disclosed the position of the 93d Highlanders. This regiment under Sir Colin Campbell was charged with the defense of an inner line which extended along an isolated rise commanding the land approach to Balaklava.

Immediately below the watchers near the foot of the escarpment the cavalry division was encamped. Commanded by Lord Lucan, the division consisted of one heavy and one light brigade.

But the attention of Lord Raglan and his staff was not centered on friendly troops. All eyes were fixed on the eastern horizon where there was a menacing spectacle. The approaches from that direction were black with hostile columns. By a surprise march the Russian field army had marched around the flank of the besiegers and was now driving in to take the line of redoubts in enfilade and interpose between the British Army and its base.

The Russians had the advantage both of position and the initiative. Number 1 redoubt was—so to speak—in the air, and once taken would serve as a supporting point for the successive capture of the other redoubts. Immediate action to meet the threat was imperative. But what should be done?

To withdraw troops in strength from before Sabastopol to positions on the plain below would require several hours. Nothing involving maneuver could be expected of the 93d Regiment. Time was working against the British. There was only one answer—use the cavalry division. It does not appear, however, that Lord Raglan announced any decision at this time.

The Russian advance continued and number 1 redoubt was soon captured. Then to the horrified amazement of the observers, now including the French commander and his staff, the occupants of redoubts number 2, 3 and 4 were seen to scramble out of these works and stream in disorder towards Balaklava. The next sight the observers had perforce to witness was the undisturbed occupation of the abandoned positions by the enemy. After disabling redoubt number 4, the Russians abandoned it, probably because it was too far advanced.

Lord Raglan's decision at this time was to move two British divisions from the plateau to the plain. The French commander ordered some infantry and two regiments of *chasseurs d'Afrique* to support the British.

Harrowing as the preceding events must have been to the observers, they were but the prelude to something worse. A new factor now entered the situation. Out from behind the Russian forces to the northeast came an immense block of cavalry numbering at easy estimate several thousand. Marching at a walk in rectangular formation the great mass of horsemen advanced westward up North Valley.

From their balcony seats on the rim the watchers could see everything. Apparently they failed to realize that the hostile movements were completely hidden from their own cavalry.

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*Based on an article by Lieutenant Colonel F. E. Whitton, C.M.G. By permission of Wm. Blackwood and Sons, London.

There is no record in the sources consulted of any attempt on the part of the British staff officers to establish communication, visual or otherwise, with the cavalry division at this time. It would be interesting to know what their thoughts were. Both cavalry forces continued in plain view, the colossal Russian force drawing nearer and nearer and the British division remaining completely unaware of the menace. Shock action was the paramount consideration in the cavalry training of that period. It seems, though, that common sense would have dictated at least some of the ordinary provisions for reconnaissance and security.

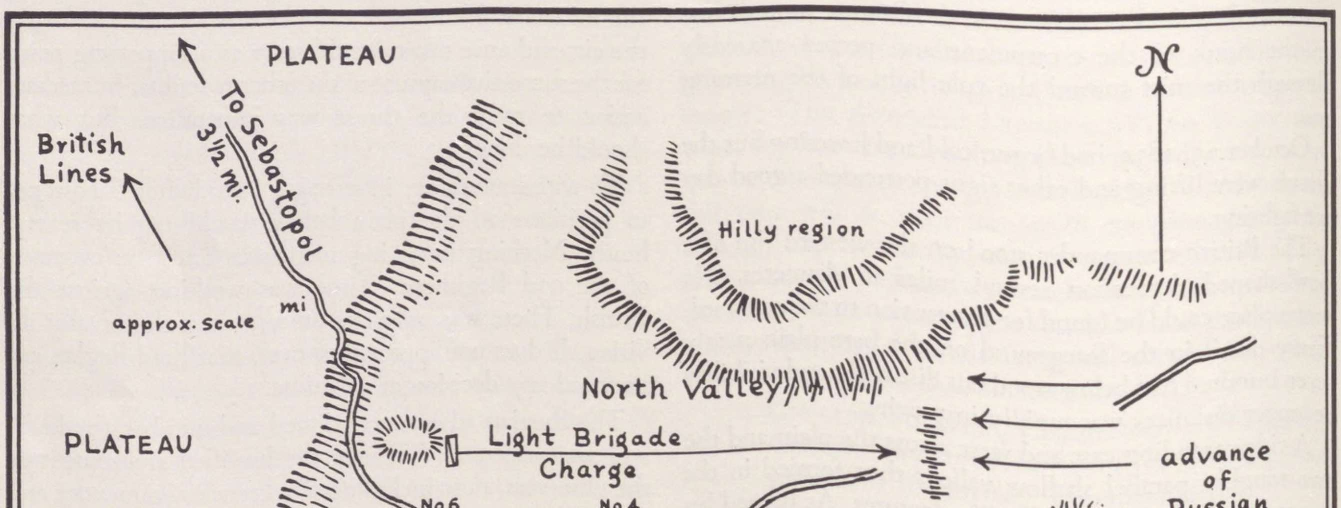
The two forces were only a few hundred yards apart when four Russian squadrons detached themselves at a trot and turned left over the Causeway Heights. After descending into South Valley they reduced the gait to a walk and proceeded in close order towards Balaklava. The main body followed them far in rear.

When the leading squadrons arrived within musket range of the apparently unoccupied hill at the head of the Balaklava gorge they were surprised by a volley from the 93d Highlanders. A few additional volleys at long range stopped the advance; the four squadrons wheeled about and withdrew to the north.

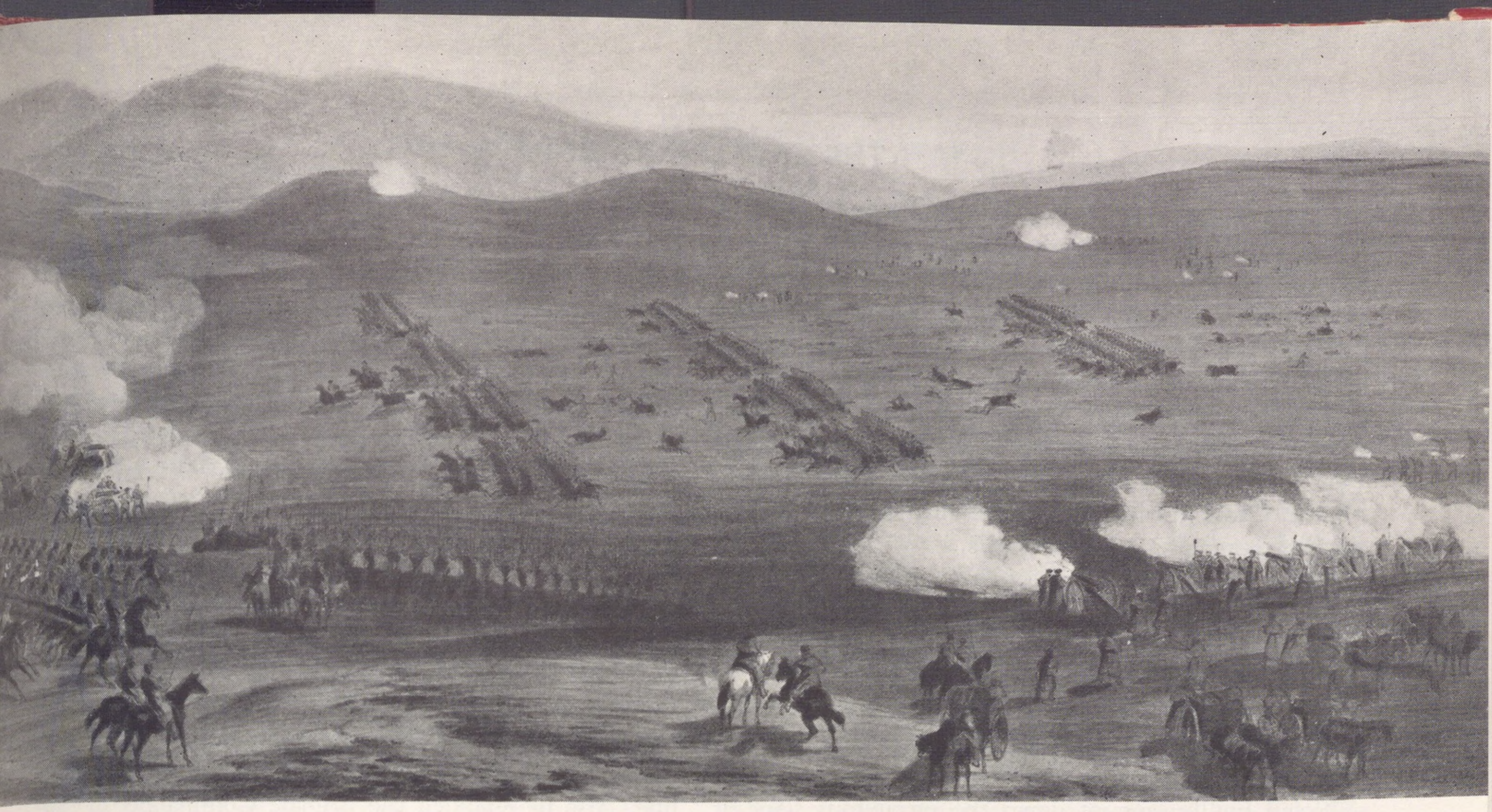
Meanwhile the British Heavy Brigade, detached for some purpose by Lord Lucan, was seen to leave its camp and march leisurely towards Balaklava, following a route which converged on that of the Russian main body.

Again the observers had to endure the suspense of watching the opposing cavalry forces draw together each blindly ignorant of the other's proximity.

The principal source from which this account is drawn is a brilliant article by the British author, Lieutenant Colonel F. E. Whitton, C.M.G., published in the December, 1938 issue of Blackwood's Magazine. Colonel Whitton states that the first intimation Scarlett, commander of the Heavy Brigade, received of the presence of the Russians was the sight of a line of lances showing


PLATEAU
To Sebastopol 3½ mi.
British Lines
approx. scale
mi
PLATEAU
Hilly region
N
North Valley
Light Brigade Charge
advance of Russian Field Army in early morning
No 6
No 5
No 4
No 9
No 2
Cause way
Redoubt Heights
No 1 Redoubt
Hq. British
Camp of Cav. Div. (British)
Heavy Brig Charge
SOUTH VALLEY
93
Highland Regt.
High ground
Balaklava
High ground
Mountains
BLACK SEA

Balaklava and vicinity showing British and Russian positions



It Happened One Day. The Charge of the Light Brigade, Balaklava, 25 October, 1854. (Drawn from a sketch by William Simpson)

above the top of a hillock a few hundred yards distant followed a moment later by rank after rank of Russian horsemen.

Scarlett's decision was instantaneous. It had to be. He wheeled his two leading regiments into line and halted to correct the alignment and steady the men. Although by then the Russians were not over three hundred yards away, the British officers dressed their squadrons as precisely as though they were on parade in London. Scarlett then had the charge sounded from the halt and with the staff led three squadrons straight against the Russian mass. Less than three hundred charged three thousand! Other squadrons of the Heavies followed into the mêlée.

As for the Russians, poorly led, lacking impetus—they were almost at a halt—and discomfitted by the superb audacity and dash of the British, they broke formation and galloped away in the direction from which they had come.

In five minutes the fight was over and the badly mixed up Heavies were beginning to reassemble. With a total strength of 800, not all of whom were engaged, the casualties amounted to less than 80 killed and wounded. Without doubt this was one of the finest cavalry actions in history.

The moment was now opportune for the Light Brigade to strike the fugitives in flank and consummate the victory, but it did not move.

Lord Lucan's actions and orders at this time are not known. Colonel Whitton states however that Lord Cardigan, commanding the Light Brigade, kept muttering to himself, "Damn those Heavies, they have the laugh on us today," and longed to launch his brigade at the enemy but since his orders were to defend the camp, he felt he must obey them to the letter. Evidently the discipline he had absorbed was of the kind that kills initiative.

This was his first experience in war. He was nearly sixty, with a mind, it was said, petrified by forty years of peacetime service. From all accounts he was arrogant, supercilious, selfish, hated by his men and generally unpopular. Withal he was brave as a lion.

So the opportunity passed ungrasped. The inaction of the Light Brigade was a disconcerting anti-climax to the wonderful victory of the Heavies.

The hour was now half past ten. About half of North Valley had been practically secured by the Russians. To the observers this valley appeared as a horse shoe, or rather a mule shoe, with the open end pointing to the west. The arch of the shoe was closed by hostile artillery, the guns, twelve in number, emplaced in line, being supported by other troops including the huge cavalry force now reformed. Both sides of the shoe for half their length were held by Russian troops including artillery; also the captured redoubts were manned and the intervening terrain occupied. With these dispositions the valley could be swept by fire from the eastern end and both flanks.

Lord Raglan must have been groping about in his mind for a decision that would fit the situation. Just at this time he noticed some movement among the Russians on Causeway Heights and formed the conclusion that they were preparing to abandon the redoubts taking the naval guns with them as trophies.

Actually the Russians had no such intentions. In fact they held on to the redoubts until the end of the war thereby blocking the main supply route and thus inflicting terrible hardships on the British during the following winter. It was not until the British had constructed another route, with a narrow gauge railroad line, farther to the west that the critical problem of supply was solved.

Nevertheless, Lord Raglan's mind was made up. Loss of the naval guns would be unimportant but the idea of permitting the enemy to take away unopposed these tangible evidences of victory with the French looking on was insupportable. He decided that the guns must be recaptured and the cavalry should do it.

The next thing was an order to put the decision in effect.

General Airey, Chief of Staff, was present. He was directed to embody the order in a message to be transmitted immediately to Lord Lucan.

Among the officers at the observation post on duty as gallopers was Captain Nolan of the 15th Hussars. Son of a British officer of Irish stock, author of a book on the use of cavalry and an enthusiastic cavalryman, one of the most accomplished horsemen in the service, excellent with the sword and a linguist equally fluent in English, French, German, Hungarian and Italian, Nolan was outstanding among his contemporaries.

It was this officer whom Lord Raglan himself selected out of the regular turn among the gallopers to carry the message.

Delighted with his mission, Nolan lost no time in getting started. Quoting from Colonel Whitton's article Lord Ragland said to Nolan after the latter had mounted, "Tell Lord Lucan the cavalry is to attack immediately."

Nolan put his mount down the precipitous slope at break-neck speed, arrived safely at the bottom and rode at furious pace to the west end of North Valley where the cavalry division was halted. The written message that he delivered to Lord Lucan was as follows:

> "Lord Ragland wishes the cavalry to advance rapidly to the front, follow the enemy, and try to prevent the enemy carrying away the guns. Troop horse artillery may accompany. French cavalry is on your left. Immediate. (Sgd) R. AIREY."

As an example of how *not* to word an order this message seems perfect.

Lord Lucan read the message and looked up in bewilderment. Who could blame him? It should be remembered that he had not had the excellent view of the hostile dispositions and terrain enjoyed by the author of the message and its bearer; a fact which both evidently had failed to realize. He did know by now however that the east end of the valley was a *cul-de-sac* strongly held by the enemy at the end and both sides. Surely it could not be the guns and enemy in North Valley that he was ordered to attack. If so, the attack would be hopeless. He began to ask for more information and to protest against the useless sacrifice of his division.

Captain Nolan broke in on him impatiently with the flat statement, "Lord Raglan's orders are that the cavalry shall attack immediately!"

Lord Lucan flared back, "Attack, sir! Attack what? What guns, sir?"

The reply came in peremptory, almost insolent tones. "*There,* my lord, is your enemy; *there* are your guns." As he spoke, Nolan pointed to the Russian double-battery in position at the far end of North Valley, with the huge cavalry force massed in rear of it.

Lord Lucan shrugged his shoulders and turned away. There was nothing more to be said. He had his orders.

Nolan joined his friend, Captain Morris of the 17th Lancers and asked permission to ride beside him in the charge.

Lord Lucan's decision was that the Light Brigade should charge and the Heavy Brigade follow in support.

Upon receipt of his orders Lord Cardigan saluted and said, "Certainly, sir, but allow me to point out to you that the Russians have a battery in the valley in our front and batteries and riflemen on each flank."

Lord Lucan assented and again shrugged his shoulders. "It is Lord Raglan's positive orders," he replied.

The orders of Lord Cardigan as given to Lord George Paget, the next senior officer were that the Brigade would charge in two lines, with the 13th Light Dragoons and 17th Lancers in the first line and the 4th Light Dragoons and 8th and 11th Hussars in the second.

Lord George Paget was to command the second line with especial instructions to give Lord Cardigan his best support.

At the last moment Lord Lucan interfered to direct that the 11th Hussars should fall back, thus forming a third line. Also he enjoined the Brigade Commander to "advance very steadily and quietly and keep his men well in hand."

Without troubling to give any explanations or orders to the other four regimental commanders, Lord Cardigan placed himself at the head of his brigade and gave the command. "The Brigade will advance. Walk, march. Trot," and moved off. Riding at a distance of five horses' lengths in front of the center of his first line he took for his direction point the center flash from the Russian battery and marched towards it without looking to the right or left. Tall, aristocratic, an excellent rider and perfectly turned out in the crimson, blue and gold uniform of the 11th Hussars, in appearance he was a fitting leader for the splendid brigade at his back.

The Brigade had advanced only a short distance when an incident occurred the mystery of which has never been explained. Colonel Whitton's interesting account of it, condensed somewhat because of limitations of space, is followed.

Nolan, riding beside Captain Morris, suddenly spurred his horse and galloped furiously to the front. Morris was horrified at his action and shouted, "No, no, Nolan, that won't do! We have a long way to go and we must be steady." But this did no good. Galloping hard Nolan obliqued across the field actually crossing Lord Cardigan. After committing this almost unimaginable breach of etiquette, Nolan waving his sword turned in his saddle as if to address the brigade and shouted some words which amidst the firing were unintelligible. At that moment a shell fragment struck him, tore open his breast. His sword dropped from his hand but he remained erect on his charger, his right arm still raised. An unearthly cry then burst from his throat; his horse swerved and he dropped from the saddle, dead.

Colonel Whitton discards as unsound the explanation of Noland's strange actions that he was trying to divert the Light Brigade from its suicidal course down the valley to the objective intended by Lord Raglan, namely, the guns in the redoubts on Causeway Heights.

Two reasons are given by Colonel Whitton for his contention: first, that Nolan pointed to the Russians at the east end of North Valley when indicating to Lord Lucan the guns and enemy to be attacked; secondly, that Captain Morris was the last man with whom Nolan had spoken and when Nolan left his friend's side Morris undoubtedly was convinced that the guns in North Valley were the proper objective.

However, it does not seem unreasonable to conclude that after the charge started Nolan realized his terrible mistake and forgetting everything else in his excitement, galloped out in front with the idea of indicating a new axis of attack and objective, and was killed while trying to do so. No other explanation of his actions appears logical.

Almost from the start the Brigade was under fire from the twelve guns in the valley and it soon came under a decimating cross fire from both flanks.

The severity of the losses was made known to the watchers on the plateau by the constant expansion and contraction of the ranks resulting from the opening out and subsequent closing in of adjacent troopers when a horse or rider went down.

The peculiar lateral variation in the ranks was so frequent and regular that viewed from a distance it had the appearance of mechanical action. The observers understood its significance and were affected in various ways. One officer burst into tears.

Torn between admiration and professional criticism, Bosquet, the French General, exclaimed. *"C'est magnifique mais ce n'est pas la guerre. C'est de la folie."*

Lord Cardigan's desire for order and correct alignment caused him to try to hold the gait down to a trot. For some time a steady pace was maintained. But there was a natural rivalry between units to avoid the appearance of lagging. Colonel Whitton relates that a trooper of the 13th darted ahead of the line yelling, "Come on! Don't let these . . . of the 17th get in front of us."

Lord George Paget had an especially difficult task in steadying the pace. The 4th Light Dragoons gradually forged up alongside the 11th Hussars forming with that regiment a second line, with the 8th Hussars echeloned to the right rear.

The lines in rear had more than their share of trouble. In addition to suffering heavy casualties they had to make their way over ground strewn with dead and wounded men and horses. Also they were exasperated by the many riderless and slightly wounded horses that from habit tried continually to force a way into the ranks. Lord George Paget in particular was pressed and annoyed in this way being borne along at one time in the center of nine riderless horses.

Eight minutes after the start the lines were yet maintaining a controlled gallop and the calmly delivered orders and admonitions of the squadron leaders could still be heard.

Lord Cardigan followed by what was left of the first line was close on the Russian guns—so close that he was selecting a gap through which to make his way—when there was a deafening explosion and great gashes of flame burst almost in his face. It was a salvo from all twelve guns.

Nearly all of the front rank of the 13th Hussars and 17th Lancers were blasted out of existence. Here and there a few untouched troopers surged through between the pieces.

Lord Cardigan's horse was knocked sideways by the blast but neither the rider nor his mount was injured and

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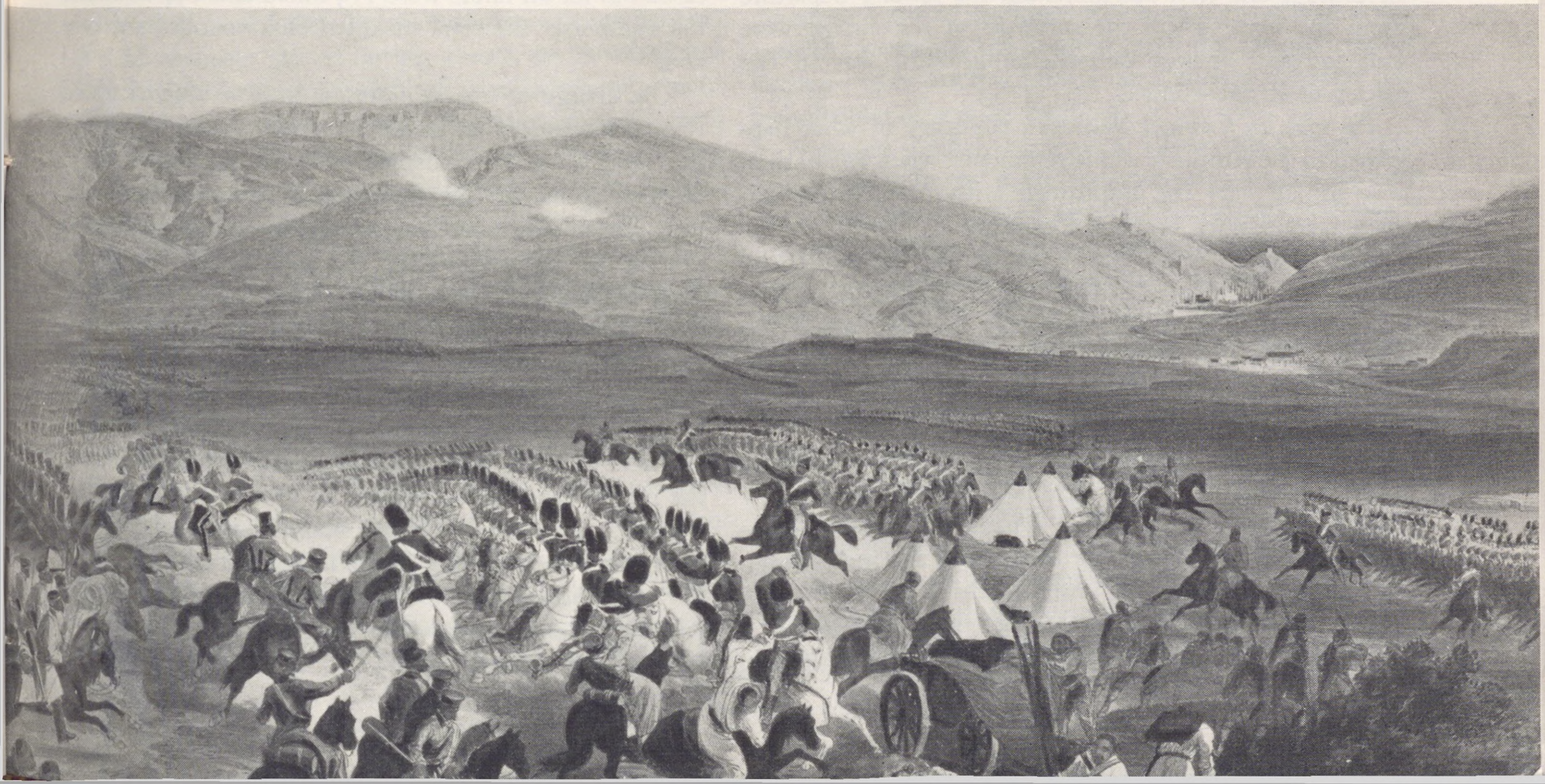
(Ed. Note: Obviously, the magnificent courage, disicipline and combative will to close with the enemy, which existed in this gallant organization, are evident to all military readers.)



A Poet's Dream. The Charge of the British Heavy Brigade, Balaklava, 25 October, 1854. (Drawn from a sketch by William Simpson)

the charge was continued up to the muzzles of the guns and through an interval between two pieces. Thus the brigade's commander was the first to enter the artillery line.

On he went through the smoke and flame past limbers and caissons, practically alone, until he found himself in the open, confronting several regiments of Russian Cavalry standing at a halt on a few paces distant.

Some Cossacks made at him and one of them wounded him slightly with a lance. Defending himself as best he could with his sword, he wheeled his charger and dashed back through the line of guns.

Once clear of the enemy position, he looked around in bewilderment. He was alone. Both aides had become casualties. The handful of front line men who had followed him through the guns had either been killed or gone on. Of the second and third lines, the bulk of the survivors had swept around the guns and disappeared.

He could see dead and wounded men and horses thickly strewn along the track of the charge, and men less seriously wounded or unhorsed slowly making their way towards the Heavy Brigade which had halted about half way up the valley.

Lord Cardigan may have thought then that he had made the charged followed only by his front line. He had never once turned his head to see who was following him.

So he rode slowly back, unharmed by the fire still coming from the heights on both sides.

Characteristically as soon as he reached the Heavies he began to complain about Captain Nolan's conduct declaring that he had been grossly insulted by a junior officer.

"Say no more, my lord," was Scarlett's reply. "You have nearly ridden over Captain Nolan's dead body."

Such was Lord Cardigan's part in the most famous cavalry charge in history. After the example he had given of courage and iron determination the solitary departure from the place where the survivors of the charge were still fighting against overwhelming odds, was in the nature of an anti-climax.

As told by Colonel Whitton, the story of what happened to the remnants of the regiments, when left to their own initiative by the unfortunate withdrawal of the Brigade Commander, is of vivid interest.

The Brigade Commander's retreat was not noticed by the survivors. Reduced to a mere handful of mounted men for each squadron, divided generally into two wings that were out of touch with each other, they charged on into the masses of Russian Cavalry and drove them from the field.

The confusion of the mêlée of course was augmented by clouds of drifting and swirling smoke that hung low over the scene. It is indeed difficult for anyone whose entire experience of war has come since the introduction of smokeless powder to visualize the conditions under which men fought in close combat before that time.

Repeating the mistake made earlier in the day when confronting the Heavies, the Russian Cavalry received the attack at the halt. Defeat, temporary at least, followed as a matter of course.

It is estimated that the British cavalrymen who reached the position behind the Russian guns remained there nearly five minutes—long enough for two regiments, then numbering only about fifty men each, to halt and reform.

The respite was brief for the Russian Cavalrymen were recovering from their panic and preparing to sweep down on the exhausted British.

Lord George Paget had escaped death. Unable to find the Brigade Commander—he had been anxiously calling, "Where is Lord Cardigan?"—he decided to withdraw immediately. Returning on the north side of the valley with about seventy men of the 4th Light Dragoons and 11th Hussars he encountered several Russian squadrons but as they remained at a halt on his flank he was able to brush by them.

Similarly Colonel Shewel with about the same number of troopers belonging to the 8th Hussars and 17th Lancers withdrew along the foot of Causeway Heights, sweeping aside several Russian squadrons that tried to stop him.

The French also helped during the withdrawal. General Morris of the French Cavalry, seeing to his amazement that the British were charging into the Russian death trap, determined to do what he could to aid the survivors. He sent the 4th *Chasseurs d'Afrique* to charge the Russian Artillery emplaced on the north side of the valley. The regiment made a highly successful charge and its timely action was of great service to the British.

The whole engagement did not take over twenty minutes.

When what was left of the Brigade assembled on the slopes of the Causeway Heights facing Balaklava, the rolls were called. Of some 660 men who had started in the charge, 195 mounted men answered to their names. The casualties for all ranks were 113 killed and 134 wounded. For the horses the total in killed and wounded was over 500.

The charge of course resulted from a blunder. Lord Raglan was furious at the destruction of the Light Brigade, the more so as the Russians retained possession of the captured guns. In his official report he stated that it was Lord Lucan's duty to have refused to charge the Russian guns at the end of the valley. As to the charge itself, however, he said in a letter to Lord Lucan that it was "the finest thing ever done."

In reply to the official report Lord Lucan naturally stated that he had no option but to carry out the orders, both written and verbal, conveyed to him by Captain Nolan.

There were many recriminations and expostulations on the part of those concerned.

However, no modern officer would hesitate a moment in fixing the responsibility for what happened. Lord Raglan was clearly responsible. The fault lay in the vague and ambiguous order sent with his knowledge and sanction to the Cavalry Commander.

The Artificial Element in MANEUVERS

By MAJOR REGINALD HARGREAVES, M. C.
British Army, Retired

(EDITOR'S NOTE: The candid and searching comments of Major Hargreaves on the subject of maneuvers are of particular note at this time. Others have noted that in the average maneuver the most serious deficiences occur mainly along the line of contact of front-line elements. Only umpires there of a competent tactical background appear able to maintain a degree of control which leads to an air of reality. In cases where officers not so qualified conduct affairs on the line of contact, superficial and artificial situations too frequently occur. The question arises as to whether the prevailing system of bestowing superficial penalties does not lead likewise to artificiality. The most overt tactical blunders and deficiences are too often penalized by a mere delay or suspension of a half hour or some comparable penalty. Human beings learn best through pain; the same holds true on the field of tactical maneuvers. It is realized that the main picture visualized for a particular phase of a maneuver cannot be permitted to become drowned through the minutiae of engagements of small elements, yet no lasting lessons are presented nor impressed on the mind of any individual where vital tactical deficiences involve no stringent mental or physical pain. Unless such a tendency is adjusted, there is danger of many becoming inhibited with a false sense of tactical values.)

"Maneuvers" constitute the *raison d'etre,* as they provide the culmination and the justification, for all the months of multifarious military activity which have preceded them. They are—short of actual warfare—the ultimate test of the efficacy of the training methods pertaining at the time, as they are of the soundness, or otherwise, of the particular school of strategical and tactical thought which has dictated those particular methods of military tuition. Training time may be compared with the actor's learning of his individual part; maneuvers, if not actual performance, correspond at least to a combined, "all-out" dress rehearsal.

Moreover, the purpose of maneuvers is twofold; the lessons to be derived from them both positive and negative. For as much may be learned from a careful analysis of those sins of omission which are bound to manifest themselves, as by the study of those sins of commission which, with equal inevitability, mark the prosecution of almost any form of military activity.

Maneuvers, if they are to possess any lasting value, should above all things serve to translate the prosecution of the military art from the airy sphere of the theoretical and academic to the solid hinterland of the severely practical. It is far easier to win a modern Arbela on paper than, on the battleground itself, to lead a single company successfully to the assault.

It is, then, of the very first importance to render the conduct of maneuvers, in the most literal sense of the term, matter-of-fact; to denude them by all possible means of all taint of artificiality; to ensure that they are prosecuted under conditions which, so far as is in any way possible, reproduce the circumstances, the atmosphere, the hazards, the unexpectedness and the numberless imponderables of warfare itself.

And that is where maneuvers, all too often, most lamentably fail. In the main, the enterprises undertaken are far too clockwork in their development; events go forward far too smoothly; the whole scheme of things is far and away too symmetrical, a great deal too tailor-made and well-groomed; the machinery never seizes-up for lack of oil; combinations move to their appointed and unhindered end with all the precision of an engineering exhibit—or a master-guided game of chess. Even when a small hitch does arise here and there, it is glossed over and puttied-up with a celerity and aplomb which is reminiscent of nothing so much as an accomplished hostess "covering-up" a dinner-table *faux pas* without so much as turning a hair of her immaculately coiffeured head. Moreover, even when minor *contretemps* do occur, they are more often the outcome of faulty direction within the force itself than due to any influence brought to bear from outside—i.e., from the "enemy." They can, therefore, the more easily be straightened out or obscured.

But warfare itself, unfortunately, does not work out like that. Warfare bears no resemblance to a stately progression of events, one following as the logical outcome of its predecessor; an uninterrupted, steadily-rising crescendo of effort, culminating in a final pyrotechnic set-piece, with every cracker and "Catherine wheel" in its place and fizzing and banging in complete unanimity and accord—with the troops marching virtuously back to their dinners with a punctuality not to be outmatched by a transcontinental express.

C'est magnifique, mais ne c'est pas la guerre, as Bosquet succinctly observed of the Charge of the Light Brigade at Balaclava.

Actually, warfare, with its reprehensible habit of getting the bit between its teeth, is a thing more prone to progress by fits and starts; it is always untidy and incalculable, and, at times, displays an almost Puckish sense of irresponsibility. Our large-scale attack once launched, but rarely assumes the shape in which we had planned it; seldom after the initial gambit has developed, is it possible for us to keep it under anything bordering on control.

All of which is at least three-quarters attributable to that element of the unforeseen—and its fluctuating effect upon the development of our own plans—embodied in what might best be described as "hostile interference."

It is the absence of the element of "hostile interference" —in the real sense of the term—which tends to artificialise, and thus to stultify, maneuvers which are based upon too-faithful an adherence *to the doctrine of "let's pretend."* In effect, for the full value to be wrung out of maneuvers, large or small, *the fetish of "Now, now, now, we're only trying things out,"* must be discarded in favour of the principle embodied in "Let's get down to it and make it real!"

As to how this "consummation devoutly to be desired" can best be accomplished, the writer has every confidence that upon the few, tentative suggestions which are hereafter put forward, ingenious and imaginative minds will be able to enlarge and improve almost *ad infinitum*.

Very largely, it boils down to a question of Umpires.

To begin with, there are never enough of them; and to go on with, the activities of the breed can mostly be divided into three categories—the timorous, the perfunctory, and the casually sweeping.

By way of illustration of what is meant by the foregoing submission, let us take the following example—one to be duplicated in almost any large-scale maneuvers ever held.

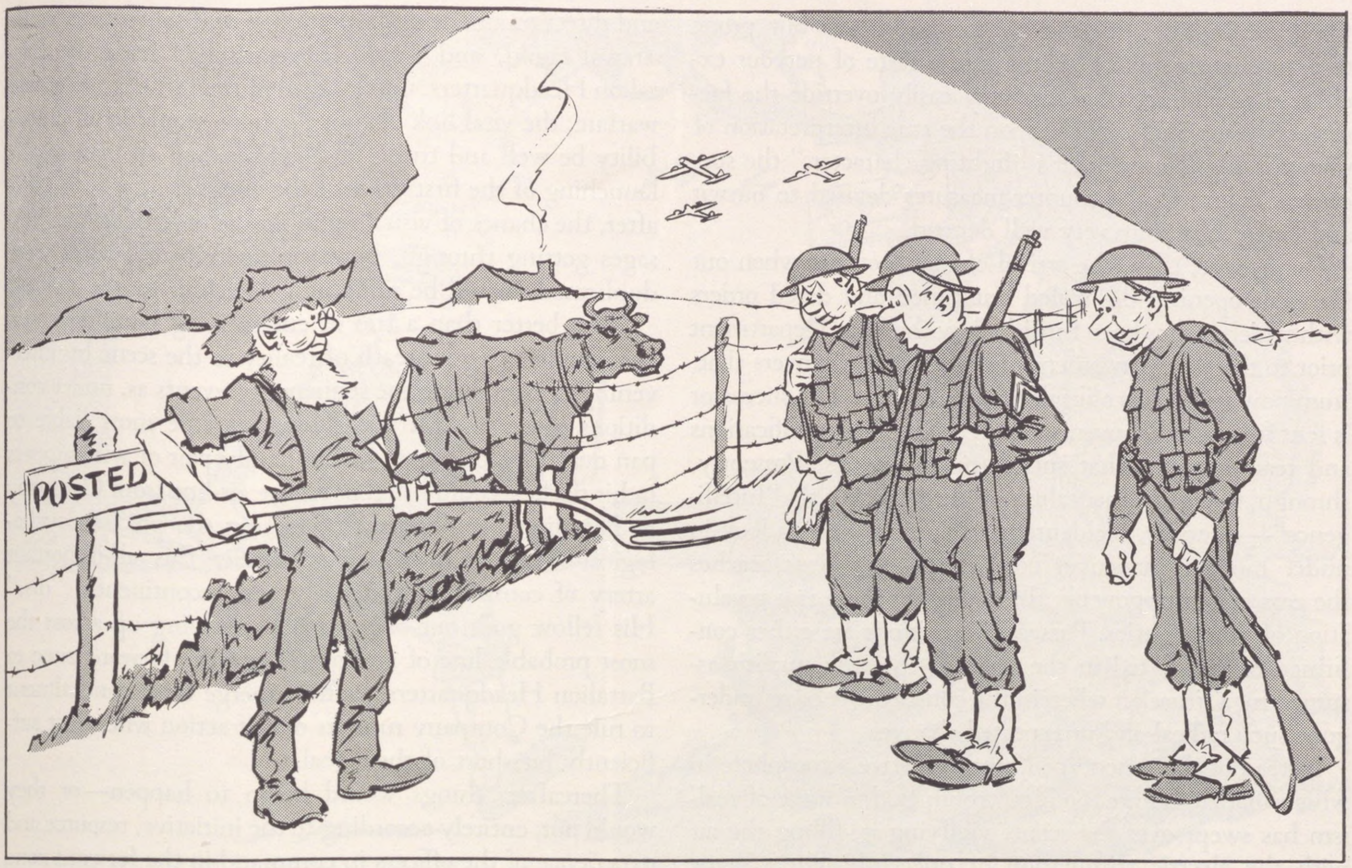
A platoon, on the extreme flank of a strung-out Brigade attack over broken country, comes unexpectedly under "enemy" flanking fire, from a force in slightly greater strength than itself. Always allowing that an Umpire happens to be on the spot at the time—and that is allowing a good deal—either the whole platoon is ruled out of action, or, *for the sake of not marring the whole scheme of advance,* the superior force is alleged to have been driven in and the platoon continues to press on as though nothing more serious had tried to impede its progress than a five-barred gate with its padlock left conveniently unfastened.

Here is a vicious example of the prevailing curse of maneuvers, combining the elements of expediency, artificiality and "let's pretend" in almost equal degree.

In actual fact, the platoon which committed itself to such a *bouleversement* would incur casualties up to—say five to seven per cent within the first few minutes; thereafter, if it knew anything of its business, settling down to deal with the situation as it found it, at a small additional cost which it would almost certainly equalise by inflicting about the same ratio of injury upon its opponents.

Now, providing that the Umpires were in sufficient plentitude to permit of one accompanying each platoon, at least, of the forward line of advance, let us see what would happen. The platoon comes under fire—and under the keen and immediate observation of the Umpire travelling with it. What does it do? Is it swift to recover from the shock of coming under unexpected missile action? Or does it flounder, bunch, hesitate as to the immediate action to be taken? All this the Umpire is observing with the utmost attention, since it is upon the little forces unhesitant and immediate reactions to "hostile interference" that his judgment as to the toll of casualties with which he will penalize it must obviously be based.

Say, for the sake of argument and example, that the platoon Officer loses his head; an unfortunate example followed by the N.C.O's with the honourable exception of the Platoon Sergeant. Immediately the Umpire rules the Platoon Commander and the ruck of his demoralized subordinates as among the seven per cent casualties which in the particular circumstances, he would be justified in inflicting. And then arises the interesting situation begotten of the necessity for the Platoon Sergeant and—say, one remaining "Single-Striper," to "take over." They make a job of it, we will argue; get their men down to business and with one section bring a volume of fire to bear on the "enemy" little inferior to that which is being pumped at them; what-time a skilful outflanking movement is put in train which shortly renders the position originally held by their opponents absolutely untenable. A few more "casualties" are added by the total originally incurred by the attacking platoon, of course; but they have inflicted considerable damage on their "enemy," it is adjudged, before a combined movement is agreed to have succeeded in turning him out of the position he initially occupied. (EDITOR'S NOTE: How about evacuation of casualties?) Thereafter, the general advance is free to continue, *less something of the toll which would have been taken from it in actual battle, and plus a useful, matter-of-fact experience of what would be likely to occur in real warfare.* All of which piece of realistic combat give-and-take has been ruled, controlled and, in essence, rendered possible by the intelligent interpretation put upon his duties by the Umpire on the spot. More than that, by decisions immediate



A company encounters resistance in force

and patently based upon sheer horse-sense, the Umpire has given the incident an atmosphere as nearly approximating to reality as is possible without the introduction of live rounds in the rifle barels.

Another instance where "hostile interference," (in terms of what is usually referred to as an "act of God"), is rarely permitted to intervene, is in the functioning of the Higher Command.

Our Commanding General takes the field, and never is his, metaphorical, death or actual indisposition or mishap allowed to interrupt the unhampered continuity with which Headquarters carries out its responsibilities under his direction. Yet in actual warfare such nice discrimination has been known to suffer serious deflection on more than one occasion. Sir Ralph Abercromby, for example, was killed at a highly crucial moment while in command of the British forces at the battle of Aboukir in 1801. Sir John Moore was stricken down at an equally vital period during the retreat and embarkation of his troops at Corunna. Even so late as the beginning of the 1914-18 struggle, General Grierson, the Commander of the British 1st Corps, died in the train on the very eve of his men first going into action; while John Gough, Haig's Chief of Staff, was mortally wounded by a sniper during one of the most tense and precariously balanced moments of the initial clash of the rival armies. Yet another example of the effect of "hostile interference,"—if we envisage a slightly wider interpretation of the term — is afforded by Washington's summary and, it is generally conceded, entirely justifiable removal of Major-General Charles Lee[1] from his command during a highly-precarious phase of the battle of Monmouth Court House; an intervention which resulted in as profound a repercussion on the chain of command as it unquestionably influenced the fortunes of the day.

To indulge, on occasion, in a simulation or reproduction of such a far-reaching incident as the sudden "death" or forced relief of our own or the opposing G.O.C. could not, it is submitted, prove other than searchingly instructive. The sudden change in the direction of affairs, as in the actual chain of command itself, that the implied all-round readjustment of responsibilities would entail, could only prove of tremendous value in testing the resilience and flexibility of all those upon whose work the swiftly-imposed metamorphosis enjoined the necessity for instant realignment and reorientation. Moreover, the instructional value of such a device would not be confined solely to the side upon which it had been inflicted. The change in so important an individual as the General in Command of a large scale military operation is a matter of considerable concern to his opponents. With a new man in control, there are many questions to which his antagonists must try to find the answer. What is he like? What are his qualifications for command? What are his salient characteristics as a battle-fighter? Is he cautious, not easily "rattled," dogged and full of a slow but tenacious determination?

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[1] In no way to be confused with "Light-Horse" Harry Lee, a very different proposition. Charles Lee had at one time been in the British service, and has been described by one eminent historian as "of small credit either to his own country or to that of his adoption."

Or is he volatile, brilliant by fits and starts but prone to take chances, easily fretted into a state of nervous excitation wherein recklessness may easily override the faculty of steady judgment? Upon the true interpretation of the opposing Commander's "fighting character," the success or failure of the counter-measures devised to outwit and defeat him may very well depend.

Presuppose, then, the arrival of that moment when our General, opening the sealed but timed and dated orders with which he has been furnished by the War Department prior to the commencement of maneuvers, discovers that, from now on, he has officially ceased to exist. His successor is sent for and takes over, with all the infinite ramifications and readjustments that such a move implies. Presently, through the instrumentality of the "enemy's" "Intelligence"—a service, incidentally, that hardly gets a look-in under modern maneuver conditions—the news reaches the ears of our opponents. Immediately there is a revaluation of potentialities. Present dispositions are either confirmed or readjusted in the light of the new quality assumed by a situation wherein the constituents have undergone such radical and unexpected change.

Instead of the stereotyped, unspeculative atmosphere in which maneuvers are too often conducted, a wave of realism has swept over the scene, vivifying it, filling the air with the electric stimulation of query, bringing home to everyone, as well as anything short of actuality can do, the fluid, unstable quality of that thing we know as war.

The above exercise would not, of course, demand the intervention of an Umpire. But to advert to instances wherein the alert initiative of such a functionary would be imperative, let us now turn our attention for a moment or two to the question of "Communications."

As any war-experienced soldier will be prepared to concede, "Communications," during a period of actual battle-fighting, constitute one of the weakest links in the chain of command—and this without in any way reflecting upon the resource and skill of the Service responsible for them. For whatever the ingenuity displayed in the planning of their lay-out and the dexterity manifested in their laying-down, they remain among the most vulnerable among war's many tendons; sensitive to the highest degree and ever subject to wholesale and devastating dislocation—at the hands, needless to say, of "hostile interference." Yet it is upon their steady, uninterrupted maintenance that the whole control of unpredictable events depends. But it is impossible to burke the fact that the regularity of their collapse under active service conditions is only to be matched by the smoothness with which, in the main, their activity goes forward throughout the period of maneuvers.

Let us, now, examine the problem of "A" Company, under orders to hold on to any isolated redoubt in the forward zone, not to the last man, but until the maximum of damage has been inflicted on the hostile advance compatible with the obligation to slip away without serious loss, so as to reform on the main line of resistance.

Under average maneuver conditions, the whole timing and direction of the delaying action and subsequent withdrawal could, and would, be controlled from the Battalion Headquarters, unregardful of the fact that, in actual warfare, the vital link of the telephone would in all probability be well and truly "dis" within half an hour of the launching of the first wave of the enemy's attack. Whereafter, the chance of visual signalling or of hand-borne messages getting through, however carefully the latter were duplicated, would be something like four to one against.

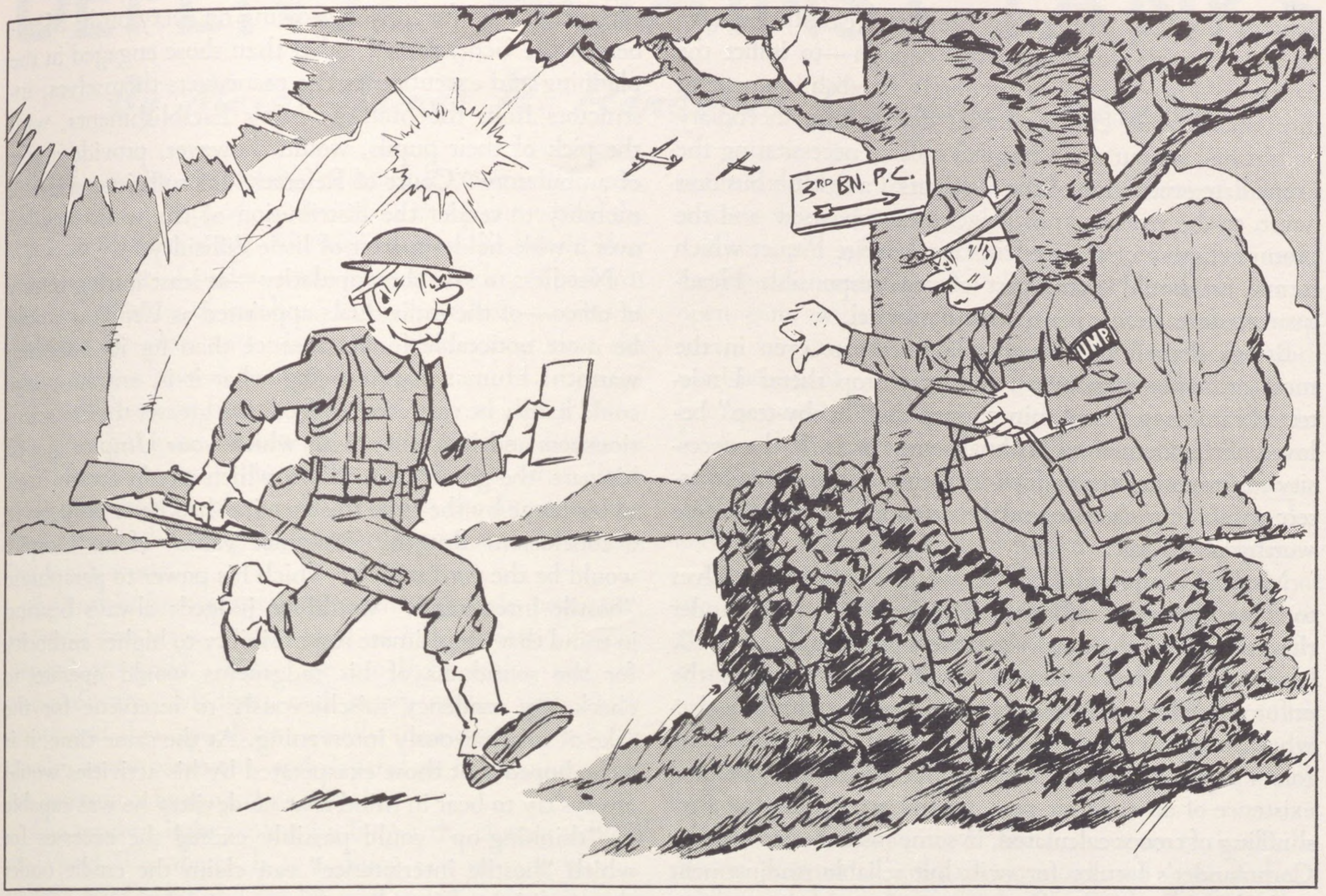
Who better than a trio of enterprising Umpires could conspire to bring a breath of reality to the scene by intervening to paraphrase the sequence of events as, under conditions of actual warfare, they would be most liable to pan out? One of them, with a handy pair of wire-nippers in his pocket, could listen in on the air-line from Company to Battalion Headquarters, choosing the precise psychological moment in which to render this all-important artery of communication flatly and incontinently "dis." His fellow gods out of the machine, lying up across the most probable line of approach from the forward zone to Battalion Headquarters, would emerge from concealment to rule the Company runners out of action when just sufficiently far short of their goal.

Thereafter, things would begin to happen—or they would not, entirely according to the initiative, resource and experience of the officers in command in the forward zone and at the Battalion nerve centre of control. And once more a tense, stimulating atmosphere of reality would have replaced that condition of stagnation and desultory correctitude into which such exercises are too often permitted to degenerate.

Then let us take the question of supplies; let us excogitate for a moment the almost automatic manner in which, under average maneuver conditions, they sooner or later reach their respective destinations. Doubtless, in these days, there may be a "practice" movement attempted here and there while the services of supply are going about their job. Some such thing as taking cover, while on the road, from aerial observation and attack. But, at best, this momentary concession to a vague potentiality is no more than perfunctory, to be hustled through with and forgotten as soon as possible, as an unwelcome intrusion upon the main, technical preoccupation of the Supply personnel with such recondite professional problems as sub-railheads, refilling points, distributing centres and the like.

But let us try and picture for a moment something of what would happen if the "practice" were taken *au grande serieuse,* with a team of ubiquitous Umpires on hand to adjudicate on the degree of its success or failure.

Along comes the convoy, meticulously spaced out (one hopes!) and observing all the niceties of vehicle control and road discipline. Suddenly, out of a convenient low-cloud ceiling, emerge half a dozen heavy bombers. Two of them, by what one of the Umpires decrees to be an example of accurate bombing, promptly put the head of the column out of action. This has an inevitable tendency to make the following string of lorries pile up on the back of the *débâcle* up forward. In the absence of any mobile



Stop the runners just short of battalion headquarters

anti-aircraft defenses to protect them, the column's personnel either sit paralysed and helpless—awaiting the attention of the aircrafts' machine-gunners, try, individually to scatter and take cover, or endeavor to turn their vehicles off the road and dodge pursuit by a little cross-country zigzagging.[2]

In effect, for the next ten minutes, pending the appearance of a squadron of our own fighters to induce the "enemy" bombers to turn tail and make off, there is pretty merry hades along the victimised stretch of road; and our nimble-minded Umpires are fully alive to all the consequences which must follow on the heels of such an unfortunate mischance.

Not for them to blow a whistle signalizing that all is now over and that everyone can proceed upon his way as though nothing whatever had happened—as would be the way in most convention-ridden maneuvers. Deciding that at least a third of the vehicles had suffered sufficient damage to prohibit the continuance of their journey, they accord the balance permission to proceed *only after a lapse of time tantamount to the delay which would actually be entailed had the smashed-up head of the convoy to be cleared away in brutal fact rather than in convenient theory!*

The supplies would be late in delivery, and in quantity only amounting to two-thirds of their normal issuable bulk?—Certainly. But though the troops put unexpectedly upon short commons through this deliberate piece of official hard-heartedness would undoubtedly grumble and curse profoundly at the outset, were the circumstances fully explained to them, it is an even bet that they would enter into the spirit of the thing and plunge with zest into the business of improvisation and making-do which they would recognise as the ineludible outcome of the "disaster" inflicted upon their comrades earlier in the proceedings. Their subsequent minatory advice to those same comrades, on the advisability of taking "all due military precautions" when bringing up supplies to the front, would unquestionably have a highly salutary effect and, moreover, would be worth going a considerable distance to hear!

Umpiring, as has been implied, apart from the necessity for determination and discrimination, would have its roots in a combination of sound military knowledge and plain horse-sense. Thus an Umpire *au large* upon his lawful occasions who came upon a break-down lorry busily engaged in repairing truck or combat car fully in the open and within sight and range of hostile artillery, would gently but firmly point out the error of such a proceeding, and thereafter rule both victim and would-be rescuer out of action. Equally, a badly-sited First Aid Post or Casualty clearing Station, filling up with the "wounded" sent down to it by other industrious Umpires, busy in the forward areas, might suddenly find itself penalised by the loss of a quarter of its staff, through the action of irresponsible

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[2] This situation actually arose during the advance of the Italian mechanised Divisions to the support of the Franco forces based on Guadalajara for the investment of Madrid. See CAVALRY JOURNAL for July-August, 1939.

"enemy" artillery, deemed, by the Umpire on the spot, to be near enough—and barbarous enough—to inflict the damage. Whereafter, in a peculiarly fiendish moment of inspiration, your Umpire could decree that incendiary bombs had set our main hospital ablaze, necessitating the immediate evacuation of the "patients," a ticklish business never, to the writer's knowledge, even rehearsed, and the prompt display of their talents by the Fire Piquet which forms, or should form, part of any responsible Headquarters formation's permanent personnel.

Bridge demolition already plays its part even in the most orthodox maneuvers; but why stop there? Undetected tank traps, land mines, even the "booby-trap" beloved of the German in his final retreat of 1918, the necessity for imposing the sudden incidence of these should assert an abiding claim upon the attention of any Umpire worthy of his salt.

Medical Umpires, of course, would confine themselves to those aspects of military enterprise which come under the purview of their strictly professional ambit. A well, brusquely decreed as contaminated, for instance, by the enforced deflection of troops to find necessary water elsewhere, might seriously affect the tactical disposition of the forces at a local Commander's disposition. The assumed existence of an endemic pest, no less, would impose a reshuffling of troops calculated, in some instances, to test the Commander's faculty for swift but reliable readjustment to the limit.

Enough has been written, it is hoped, to indicate to what vast extent the introduction, by means of the employment of vigorous, intelligent umpiring, of a real live simulacrum of "hostile interference" would enlarge the scope and add to the verisimilitude of that testing time of an army's field efficiency known by the generic term of maneuvers.

It is recognised, of course, that the task of umpiring would prove no sinecure. Nor could one hope to find competent men for the job growing on every bush. Members of the General Staff, other than those engaged in the planning and execution of the maneuvers themselves; instructors from the Staff Training Establishments, with the pick of their pupils, would, however, provide a sort of ambulatory "Court of Referees," of sufficient size and mobility to render the distribution of the work entailed over a wide field a matter of little difficulty.

Needless to say, the popularity—at least during tenure of office—of the individuals appointed as Umpires would be more noticeable for its absence than for its bubbling warmth! Human nature being what it is, anything else could hardly be expected. Indeed, the greater the conscientiousness and ingenuity with which your Umpire played his part, the greater the odium which would attach itself to his name by the time the exercises had been brought to a conclusion! But the "nuisance value" of an Umpire would be the yard stick by which his power to paraphrase "hostile interference" would be judged; always bearing in mind that his ultimate responsibility to higher authority for the soundness of his judgments would operate to check any tendency mischievously to intervene for the sake of mischievously intervening. At the same time, it is to be hoped that those exasperated by his activities would always try to bear in mind that no deviltry he was capable of "thinking-up" could possibly exceed the excesses for which "hostile interference" can claim the credit under the conditions of actual warfare.

Finally, it cannot be too firmly emphasized that if the agile interference and, as it well might seem, pure cussedness of the Umpire's activities operated to inhibit and throw out of gear the stodgy, orthodox, convention-ridden flow of events, even to the point of sometimes throwing them into something little short of confusion, that is as it should be. For when the guns are really going off, "Confusion" is War's middle name!

* * * *

IX Corps Maneuvers

Attention is invited to the notes of the 8th Cavalry, under Organization Activities, for an early word on the participation of the 1st Cavalry Division in the IX Corps Maneuvers.

DEFENSE AGAINST TANKS

By Major James R. Randolph, Ordnance Reserve

Tanks are very vulnerable to attack by unarmored men, once they are stopped or slowed to the point where the men can overtake them. Germans during the World War put them out of action with hand grenades. Spaniards have used bottles of gasoline. Finns have been accused of bending the guns with clubs, and then going after the inmates like a starfish with an oyster.

For the tank at bay can shoot in only as many directions as it has guns. It can see in only as many directions as it has occupants. Men can attack from the other directions with relative safety. And even in the directions the tank crew is observing their vision is poor and their hearing much worse.

Against its human antagonists the tank seeks protection in one of two ways. Tanks used on independent missions depend on speed. These are the light tanks, and the armored cars. Medium and heavy tanks, with thick armor and slow speed, are usually used with infantry or cavalry accompaniment, and depend on these other arms for protection against close attack.

The modern light tank is no longer the clumsy vehicle of World War days. It is a shifty fast moving elusive vehicle, hard to hit and not too easy to see in time. And so long as it retains the use of its speed it presents a serious problem to the defense.

But its problem of vision when in action has not been satisfactorily solved. The earlier tanks used very narrow horizontal slits. Whole bullets could not get through those slits, but bullet splash could, and frequently did, blinding the observer. Since those days various forms of periscopes have been tried. Some of our own tanks are equipped with thick plates of bullet-proof glass, easily replaced from inside, and covering openings just big enough for a man's two eyes. But great difficulty is encountered in keeping the eyes to this small opening when the tank is bounding along over rough terrain at anything like its possible speed. Brilliant performances are made in maneuvers with shutters open, but it is difficult to duplicate them under fire, when the shutters are closed.

A defense trick that looks as if it ought to make this vision problem still more difficult is a quart milk bottle full of paint and rags. This could be thrown at close range, or it could be hung from a tree limb or stood on a light pole where the tank would run into it. If the tank was going fast enough the bottle would break, and the sticky oozy contents would be spread messily over a wide area of the tank's front. It would not be easy to clean off from the inside. And if the paint was white the tank's protective coloring would be partly destroyed.

So far this trick has not been reported from any battlefield. Perhaps no battles have yet occurred in a land where large quantities of paint and milk bottles can be commandeered in any village, as they could be in America, and it's too messy to try very often in maneuvers. But still it seems worth considering.

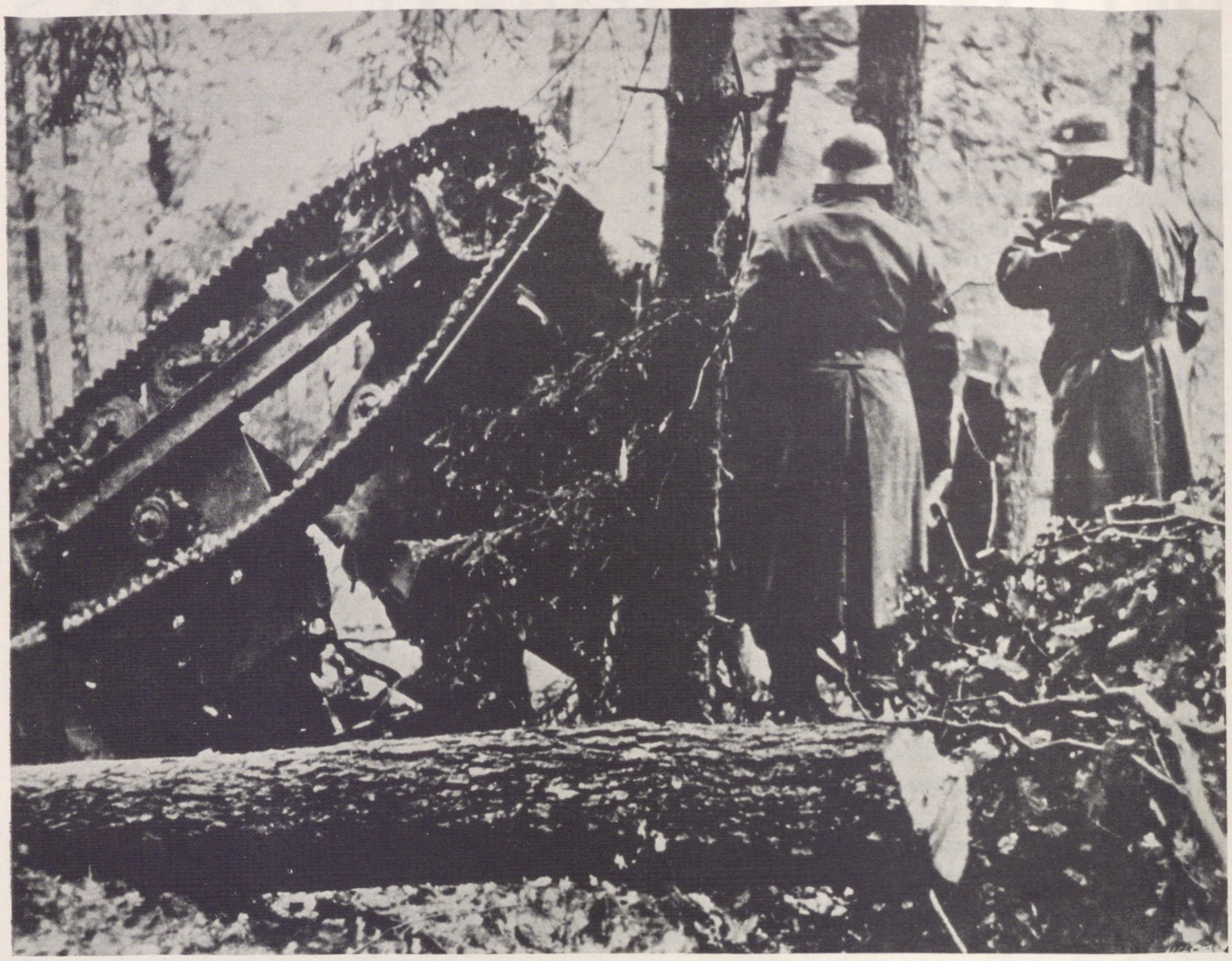
There is a great variety of opinions as to how tanks can best be used in war. Poland is for the most part an open plain with few natural barriers and little natural cover. On this terrain the German *Blitzkrieg* began with vast swarms of planes, flying low over the land, machine gunning and bombing, or covering with smoke, any defenders that were sighted, or any cover where defenders were likely to be. This forced the defenders to keep down in their holes. Then came wave after wave of fast tanks, and then came the motorized infantry and the cavalry.

Details of the Russian use of tanks in Finland are not yet available. But judging from the appearance of their tanks the Russian idea seems to be to use them primarily as a mobile artillery, able to keep much closer behind the infantry than is possible with unarmored guns. These Russian tanks seem to be equipped with one gun each, of the largest size the tank can carry, and with comparatively little else.

British and French tank doctrine seems to have the World War use of tanks still in mind, and some of theirs are large and heavily armored. But England has a home defense problem very similar to that of the United States, and some of her tank types seem adapted to it.

A purely military attack on the United States would have to come directly from overseas, or indirectly through a reinforced revolution in Mexico. In either case the enemy would have a problem of getting his forces ashore, or of getting them over some hundreds of miles of desert. And while local guerillas tried to slow him down, the main defense forces would be rushing up over our great network of good roads. These roads, and our high average of automobile ownership, make the American Army the most mobile in the world, when fighting on its own soil. And our tanks have been designed to conform to this mobility.

But the form of attack to which we are most liable is a reinforced revolution in the United States itself. This technique was used by the Communists in Spain, and its operation there is now well known. It takes advantage of any discontent it can find, and in the earlier years of the attack it attempts to organize this discontent, while at the same time sabotaging patriotism, courage and virtue in every possible way. Because it is planned and financed, and later armed, from abroad, it is not necessary to get a large force before the military phase of the attack can come. Probably ninety per cent of the Spaniards who fought on the side of the Loyalist government were no more Communist than their opponents. They had simply ignored the earlier stages of the attack, and when the shooting started they tried to choose the winning side. There were cases where as few as twelve determined men



A tank in Europe with a punctured belly

threw a city for one side or the other, simply because they got started first and seemed to be winning.

The early stages of this war showed a vast confusion, in which important victories were won by very small forces, and often by very inexperienced forces. And these small battles determined the lines along which the heavy engagements of the later stages took place.

From the invader's point of view the great advantage of this method of attack is that his recruits, most of his food, and even a large amount of military equipment are furnished by the country attacked. His headquarters is a "legally elected government." He does not even have to declare war, or openly make war, but merely furnish "volunteers" and military equipment to the side he favors. In an attack on America, these could be shipped in before the fighting started, or later flown in, and our Navy could not stop them.

Tank action in such a war has two distinct phases. The first is pretty much of a guerrilla action, with all forces trying to seize or guard strategic points, and with defense measures very largely improvised. This rapidly stabilizes into battle lines, and the choice of these battle lines will have a great deal to do with the success of the later defense.

Officers who may have charge of this important problem in the event of war should devote a great deal of time and attention to terrain, studying it for resistance to tank attack, seeing how it looks on the map, and training themselves to select quickly lines that offer the maximum resistance to the enemy's armored forces, while offering convenient sally points for their own.

Tanks cannot, without aid from the engineers, cross deep or soft bottomed streams, or swamps. They cannot go up or down steep mountainsides. They cannot go through thick woods, or through woods where large trees have been felled with their tops pointing in the direction from which the tanks must come. Wherever such areas occur on the battle line it is necessary only to provide such forces as will keep hostile infantry and cavalry and engineers from coming through and clearing a way for the tanks.

Tanks are bellied by stumps or boulders more than a foot or two in height. They cannot take stone walls at high speed. In crossing stone walls their unarmored bellies are exposed. And where such obstacles exist, cloth imitations of them will often constitute a moral hazard, reducing the speed of the tanks and giving the defense a better chance.

Artificial barriers may be created if there is sufficient time. Most elaborate are those built by the French and

Germans in the Maginot and Seigfried Lines. The German type looks as if it would take a lot more artillery pounding to make it ineffective. Effective substitutes can be built of heavy timber. A train of loaded steel coal cars is a formidable barrier, even after considerable shelling. Concertinas will tangle the tracks of most tanks, or the wheels of armored cars, requiring hours of work to release them. These are made simply by knocking the end off a spool of barbed or plain wire, pulling the wire out endwise, and allowing it to lie in loose coils in the probable route of the tanks.

Where there is time, but a lack of solid materials, ditches may form an effective barrier. These are of two types. One is simply a trench, too wide and deep and steep walled for a tank to cross. The other consists of a series of ditches, dug parallel to the expected course of the tanks. The solid ground between ditches is not wide enough to support both treads of a tank. Each ditch is too wide at the top for a tank to straddle it, and too narrow at the bottom for a tank to get both treads on the bottom at once. Hence no matter how a tank hits the formation it will probably not get through.

The effectiveness of this arrangement is still further increased by covering it with vegetation so as to make it look like solid ground. If this is done the hostile artillery will probably let it alone, and the tanks will be caught in it instead of avoiding it. Remember that a tank in a trap is not merely an addition to the score of the defense. It is, itself, a pretty effective barrier. A live horse can jump over a dead horse, but a live tank cannot cross a dead tank. It has to go around.

Natural barriers and improvised obstacles are particularly important for Americans, because of our well-known penchant for assuming that if we get into war a million men will spring to arms that are adequate only for a thousand. But if you can get them in sufficient quantity, antitank mines, and antitank guns, are extremely valuable.

A mine containing five pounds of TNT will disable a light or medium tank. It is usually made in the form of a flattish box, with a trigger sticking up for the tank to hit. This trigger is too stiff to be set off by infantrymen, so that the mine, even when armed, is not very dangerous to the defenders. Mines should preferably be in two or three rows, with the mines from three to six feet apart in a row. They are costly, and take a lot of work and transport, but they are effective.

The antitank gun used by the United States Army is a 37-mm. high velocity gun. It has a flat trajectory, so that a tank within a thousand yards of it may be considered as in point blank range. And its projectile will penetrate considerable armor at that distance. The gun has a low silhouette, making it easy to hide. And its split trail mount permits a wide traverse, so that its aim can be shifted rapidly from one moving target to another.

Its rate of fire is high. But the fact that the target is usually fast moving, requiring each shot to be separately aimed, will usually slow it down to about 10 shots per minute.

This gun is equipped with rubber tired wheels, so that it can be towed at high speed behind a truck or automobile. It weighs about nine hundred pounds, so that it is readily man handled into position, even at considerable distances from the roads.

A position that is in danger of being overrun by tanks should be organized in considerable depth, preferably about six thousand yards. The men should be widely dispersed, and should be in individual fox holes, rather than in trenches. In firm soil, or if reinforced at the edges, such fox holes will not cave in when a tank runs over them, so that the men are little affected by the passage of the tanks. Dirt removed in digging these holes may be used for building dummy trenches, or may be carried aside and disposed of.

Antitank guns are distributed throughout the position being widely spaced in the outpost zone, and thicker toward the rear. These guns are chiefly relied on to take care of the tanks. The men in the position are supposed to fight accompanying troops, and should keep out of sight during the passage of the tanks. In the outpost zone, however, they might well attack the vision devices of the tanks, either with paint or with pistols, or with shotguns. Any of these are effective at short range, and a blinded or partly blinded tank is that much easier to deal with farther on.

Details of the arrangement will vary with the terrain, and with the opportunities it presents for making or using obstacles. But the general idea is to force the tanks to make a choice, either outrunning their accompanying troops and being dealt with separately while the troops are denied their protection, or being held to the slow pace of the troops while under the fire of antitank guns.

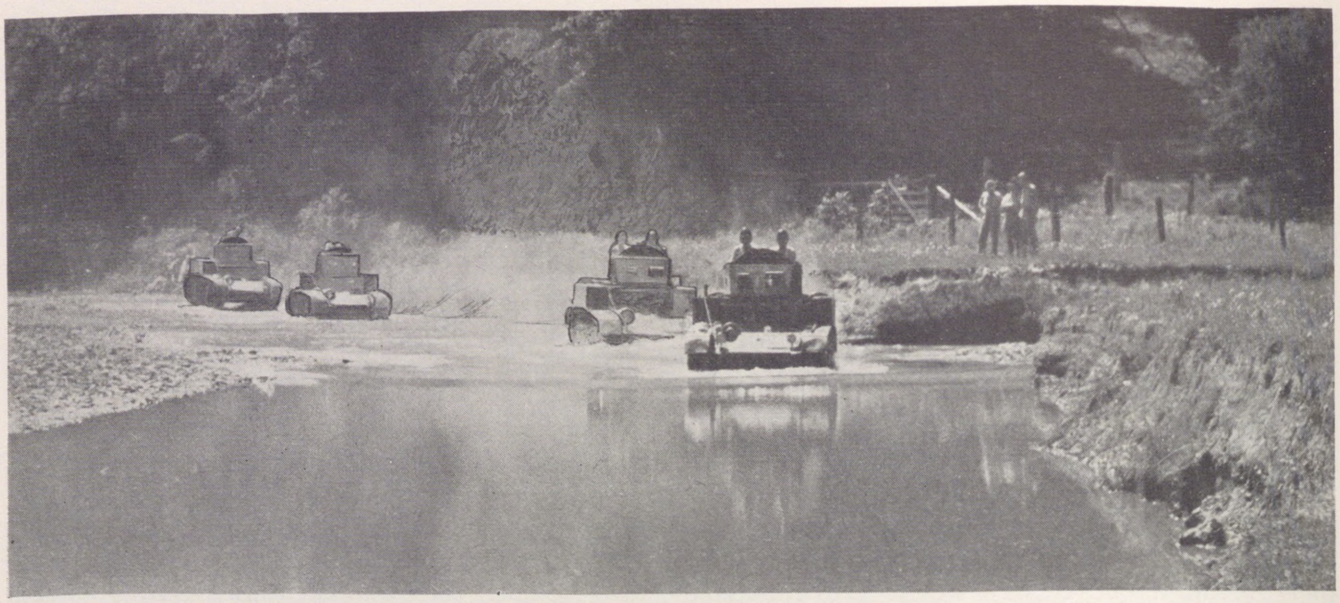
In a duel between tank and antitank gun the gun has the advantage of concealment, and of much greater accuracy. To obtain equal accuracy the tank must stop, thus making itself an easier target. Thus a position well supplied with antitank guns can be penetrated only at the cost of heavy losses. If it has hidden obstacles and mine fields besides, it cannot be penetrated at all.

Tanks that have penetrated to the enemy's rear areas are capable of conducting long raids, attacking troops on the march, attacking communication centers, and otherwise doing extensive damage. The need for rounding them up and enchysting them is most urgent.

Other tanks are very useful for this purpose, but will usually not be available. Unarmored forces can do the job, if full advantage is taken of such natural barriers and cover as the terrain affords.

Snipers distributed across the path of the tanks' advance can force them to run with shutters closed, which seriously restricts their vision, and gives their crews headaches. But the alternative would be to lose drivers by enemy fire. Shotguns are effective for this purpose.

Throughout the eastern United States the terrain is very generally rough enough to afford numerous bridges and ravines where even a tank cannot travel readily off the roads. These make ideal places for road blocks, which,



In wooded country tanks are restricted to roads and shallow water courses

even if they do not stop the enemy tanks, can delay them until stronger positions can be organized farther along. The destruction or weakening of a bridge, or the felling of large trees across a road, will do the trick.

In such a game of hide-and-seek the defense has the advantage of being able to use the local telephone lines. And his means of transportation—horses on rough ground or automobiles where roads are plentiful—are capable of greater speed than tanks can attain under these respective conditions. The defenders have clearer vision and much better hearing, and under almost any conditions can count on locating the tanks before they themselves are located.

Always, the rougher the terrain and the more abundant its cover, the better the chance for the unarmored defense. A desert strewn with clumps of sage brush drifted full of sand will seriously impede tanks, but makes easy going for horses. The same is true of a forest. Tanks can run along woods roads, no matter how rough. They can follow the beds of streams that are shallow and not too rocky. But a few antitank guns, mines, or concertinas can effectively block these channels.

Cavalry is particularly effective in a tank hunt because of its ability to fire at the oncoming tanks, compelling them to close their shutters, then mount and run through the woods to another position. Thus the vision of the tanks is constantly impaired, and their effectiveness greatly reduced.

But the tank can play this retreating game too. Most tanks have access hatches on top of their turrets, and the turrets can be turned to face the rear. Hence the tank can lie concealed in the bushes, the gunner's head out of the hatch, open fire when the enemy is sighted, and run when things get too hot.

With a variety of ground available, it is possible for either side to outdistance pursuit. Cavalry in retreat can choose ground too rough for tanks. Tanks in retreat, before cavalry, can choose smooth ground where they can use their speed. But a tank can use its full speed on ground where a wheeled vehicle cannot.

All modern American tanks have the controlled differential for steering. This enables them to follow a winding road almost as readily as a wheeled vehicle. But in some European countries, especially in Russia, there are hundreds of fast and relatively modern tanks that do not have this improvement. Such tanks are very hard to steer accurately on a woods road, and are apt to be wrecked in consequence.

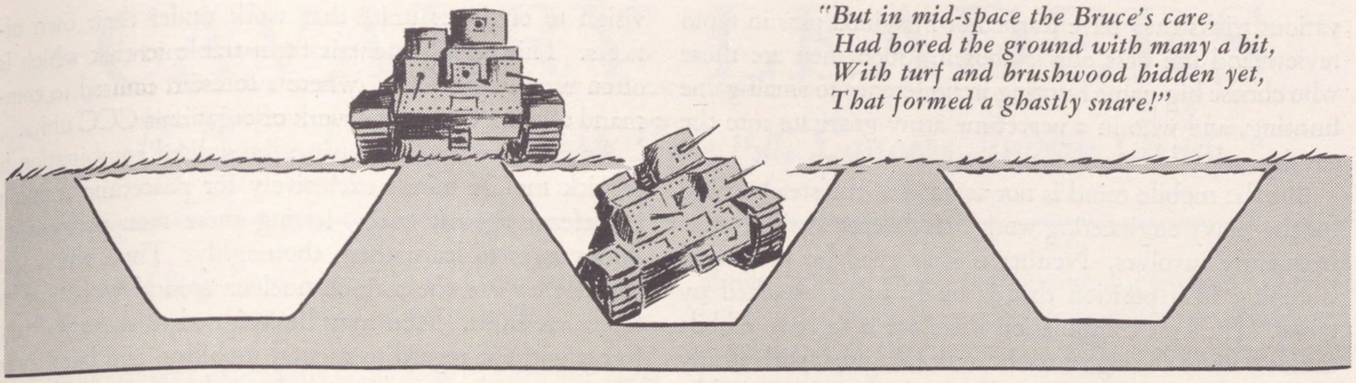
A tank's machine guns are most effective in this sort of semi-guerrilla warfare. They have fine telescope sights and are accurate at long ranges if the tank is still. And they are not cooled, as they would have to be for sustained fire. When advancing through cover against a position that is not well organized, the tanks are apt to move by alternate rushes, as men do in extended order drill. Tanks not moving will be using their machine guns, and they have the advantage over men of a much greater volume and total quantity of fire. They also have the advantage that if one tank shoots a comrade in the back no great harm is done.

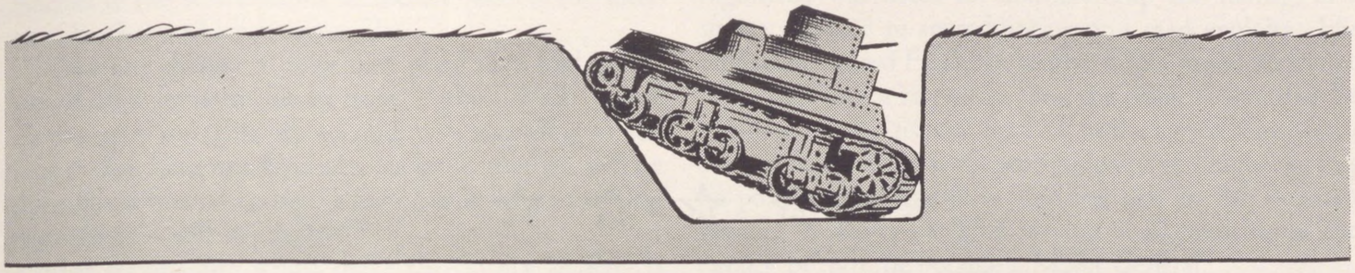
In addition to its cannon and machine guns, a tank has numerous portholes, covered with pivoted shutters, through which pistols and sub-machine guns can be fired. At short range these are more effective than machine guns while the tank is moving.

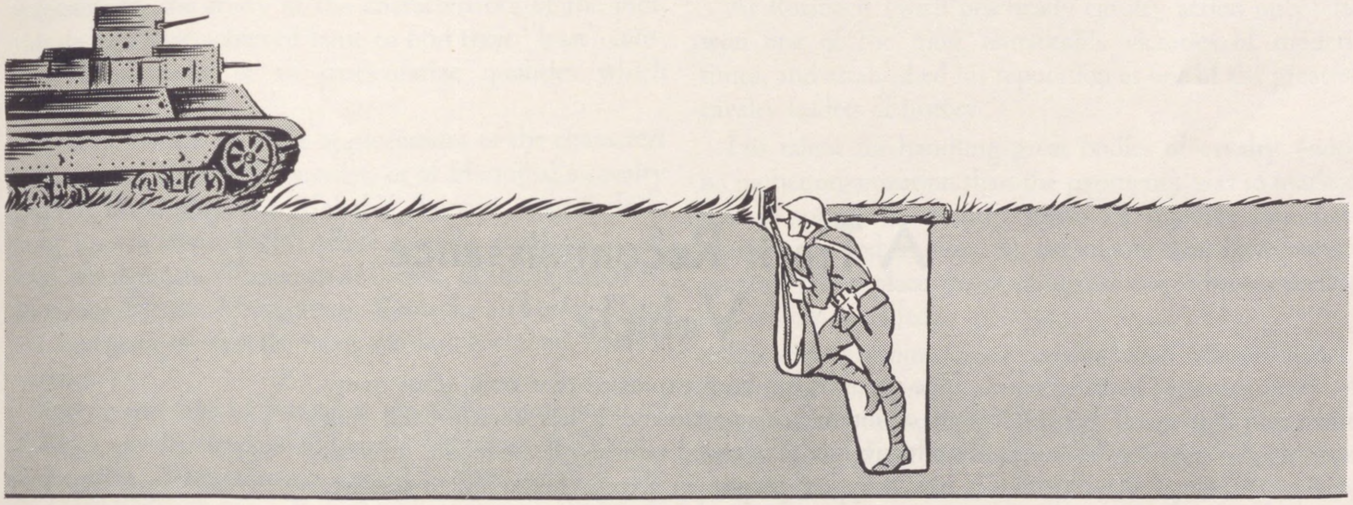
The antitank gun is well adapted to use in open warfare because of its rubber tired wheels. Equipped with a limber, it can be drawn by horses. And, as two would probably be enough, they could be hitched tandem, and could then go through woods in which the trees are too closely spaced to permit the passage of tanks.

A still more mobile antitank weapon is theoretically possible, but has not yet been developed. This is the rocket gun. Essentially, this weapon consists of a gun

"But in mid-space the Bruce's care,
Had bored the ground with many a bit,
With turf and brushwood hidden yet,
That formed a ghastly snare!"







whose projectile is a rocket, probably of the same size, penetrating power, and ultimate bursting power as the projectile of the present gun. But the gun gives it only a small velocity, so chosen that the recoil of the gun is no greater than for an ordinary rifle. As it leaves the muzzle the rocket action starts, building up the velocity to about three thousand feet per second. The gun is rifled, and gives the projectile its spin, thus keeping its nose on to the target.

It seems possible that such a rocket gun could be made as a shoulder arm, or even a hand gun, yet pack a wallop fully equal to that of the present antitank gun. It would not have the latter's rapidity of fire, but because of its greater cheapness a much larger number could be provided. Because of its lightness it might be possible for the individual soldier to carry a rocket gun in addition to his regular weapons. If each of ten thousand soldiers fired once at a charge of a thousand tanks the tank charge would very probably fail.

Under almost any circumstances a battle with tanks is a fast moving situation, in which decisions have to be made at the gallop. Often only seconds will be available in which to choose a position and get ready before the tanks appear. And when the tanks have open ground to cross the fast ones can do a thousand yards in a minute. The antitank gunner must aim quickly, decide quickly whether his target has been fatally hit, and if it is, shift quickly to another target.

Hence it would seem that antitank gunners, and the leaders of patrols engaged in tank hunts, should be men with mobile minds.* They should be men to whom an exciting situation appears as in slow movies, while the various tricks they have learned or imagined pass in rapid review and the best one is chosen. Such men are those who choose big-game hunting in preference to small-game hunting, and who in a peacetime army gravitate into the cavalry.

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*See "Mental Mobility," in the January-February, 1940, issue of The CAVALRY JOURNAL, by the author.

But the mobile mind is not as good as the steady mind for the heavy engineering work that defense against tanks frequently involves. Neither is it as good for prolonged watching in a position that is likely to be attacked by tanks. The best combination therefore is to have mobile minds behind the sights of the antitank guns, with steady minds forward to give the alarm. And to have mobile minds trained as specialists in tank defense, giving supervision to engineer units that work under their own officers. This arrangement is comparable to that which is often used in the CCC, where a forester, unused to command of men, directs the work of organized CCC units.

An effective way of getting the desired combination is to pick mobile minds exclusively for peacetime training in defense against tanks, letting these men perform all duties so as to learn them thoroughly. Then when war comes they are the trained nucleus around which larger forces are built. Men may be assigned to these wartime forces without regard to mental mobility, and later those who prove to have mobile minds can be selected to replace casualties among the original leaders.

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A Track Reconnaissance Vehicle

The thought has been expressed that now, after many years of intensified experiment, it has been proven that the effectiveness of wheeled vehicles off the road is limited. It would appear proper, in accord therewith, to initiate, without further delay, energetic efforts to perfect a lightweight *tracked vehicle* that accommodates itself to the requirements of reconnaissance. Should not such a vehicle possess the following qualifications?

A maximum road speed of 50 m.p.h.
A rubber tread track with a minimum life of 5,000 miles under average conditions.
Quiet in operation.
Ability to operate through water up to 30 inches in depth, or preferably 3 feet in depth.
Armed in vital areas against small-arms fire.

CAVALRY LEADERS

By Colonel H. S. Stewart, Late 15th Lancers, Indian Army

"An Army of Stags, commanded by a Lion, is better than an Army of Lions commanded by a Stag."

Cavalry is more dependent on its leaders, than any other arm—

"Every leader, whether of brigade, regiment, squadron, or troop, who is not strong in his belief in the power of cavalry on the battlefield, and as the strategic arm, works mischief to the best interests of the arm and to the interest of the army which it serves."[1]

"Take one thousand horse and place in a fold of the ground, then let them file in front of you. Well! These same horse, those same officers and men, according as you place at their head one kind of a leader or another, will be either like a funeral cortege which has lost its mourning caprisons, or it will be cavalry."[2]

What are qualities which make the cavalry leader? Is it feasible by the study of the characteristics of the individuals who have achieved fame to find their "least" common denominator or to particularize qualities which marked them all?

It is not possible to make appreciations of the characters of the companions of Alexander, or of Hannibal's cavalry generals Hasdrubal and Mahabal, because very little is really known about them; while scarcely anything at all is known about the "Generals of Horse" of the Byzantines, Mongols, Tartars, Hungarians, Cossacks and other Eastern European or Asiatic races famous for their cavalry victories.

Prior to the time of Frederick the Great there were no Western cavalry leaders of note. Gustavus Adolphus, Wallenstein, Pappenheim, and Charles the XII (of Sweden) initiated a use of cavalry that was greatly in advance of the tactics of the Middle Ages, but none of them rank as great cavalry leaders. The generals of the last great war in some cases are still alive; and (apart from the fact that their opportunities to use cavalry were limited) it is too soon to place them in their true perspective.

The characteristics of cavalry leaders of the armies of Prussia, Imperial France, Great Britain and of the American Civil War, are however dealt with in numerous biographies; and there is little controversy about them.

PRUSSIA

Seidlitz and Zeithen have no rivals to fame amongst their own countrymen. Both being Prussian officers, were nobly born, but neither belonged to a rich or influential family; and they were both essentially self-taught. Their fame was due to their individual merits as cavalry tacticians; and all subsequent leaders have attempted to copy their methods.

SEIDLITZ

Seidlitz (educated as a page in the Court of Brandenburgh-Schwedt and commissioned in the Margrave's own regiment) was noted for horsemanship and daring, in a society devoted to sport hunting and mad exploits. His reputation caused Frederick to give him a squadron in one of his new hussar regiments, and the efficient way that he commanded this secured for him, at the age of thirty-four, the command of an inefficient regiment of dragoons; this he proceeded to transform into the best in the Prussian service. At thirty-six, after serving in all branches of the cavalry in turn, he became a Major General.

At Rossbach (with practically cavalry action only) he won one of the most remarkable victories of modern times, and established his reputation as one of the greatest cavalry leaders of history.

His talent for handling great bodies of cavalry (with no higher organization than the regiment) was so marked that in spite of all improvements in organization, communication and systems of command that have subsequently taken place, his leading has never been excelled and seldom equalled.

His distinguishing characteristics were self-confidence, determination, quick comprehension, energy, love of danger, sport, riding, and fighting. To an objection made by the King about the number of accidents which took place in his command, Seidlitz firmly replied that, if so much fuss was made about a few broken necks, the bold horseman required in the field would never become available.

ZEITHEN

Zeithen (the son of a very poor country gentleman), had even for the period, a most indifferent education; and his career commenced inauspiciously. He resigned an infantry commission after some seven or eight years service and was subsequently turned out of a dragoon regiment, for quarrelling with a captain! At thirty-one he obtained a third commission in a new hussar regiment, and had the luck to be selected by the King for training under the famous Austrian hussar, Baronay. He became a major at thirty-six, and a lieutenant colonel at the opening of the Silesian campaign. At Rotheschloss, his Hussars (operating against his old teacher Baronay), earned him the rank of colonel and the Order of Merit; he became a major general in 1744. He was not present at Rossbach, but distinguished himself at Leuthen.

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[1] CAVALRY JOURNAL, Issue No. 1, January, 1906.

[2] General de Gallifet.

His rapid promotion had gained him a number of enemies, and, appearing to lose the King's favour, he thought of resigning; but Frederick did not allow him to do so.

Zeithen (who depended on intuition in battle), did badly in the complicated "cham fights" held by Frederick; and when examined on cavalry tactics by the King, politely replied—"I do not know just now, but should the circumstances happen in the field, when I see the enemy before me somehow it will be sure to occur to me."

Unaided by influence and in spite of an unprepossessing appearance, he won his promotion by sheer ability. He was what Napoleon termed "a general of advanced posts," his success commenced from the date of his joining the Hussars.

Generous, disinterested, unassuming, full of self-confidence and energy, quick of comprehension, and careless of approbation, he was unperturbed in action and full of daring, yet at the same time always cautious and prepared for unforeseen contingencies. He was of a lovable character and had great ascendancy over his men.

His tenacity and determination were evinced by his thrice obtaining a commission. Had his tact been greater his promotion might have come more quickly.

He died at the age of eighty-six, universally honoured and regretted. His statue still stands in Berlin.

France

Before the time of Napoleon, France produced no great cavalry leader. Napoleon's cavalry commanders are well known, and have a very high repute, although Colonel Denison[3] does not consider any of them to be the equal of Cromwell, Seidlitz, or Zeithen.

Murat, Bessiers, La Salle and Curely are certainly representative cavalrymen of Napoleon's armies. These four (two from the light and two from the heavy cavalry) happen to be drawn from four different social classes: the Lower Middle Class, the Bourgeois, the Nobility, and the Peasantry. The other well known cavalrymen of the Imperial armies (Kellermann, Exelmans, Mountburn, Nansouti, La-Tour-Marbourg, Grouchy Pajol and Milhaud) were also drawn from grades of society as divergent. Had these men not been outshone by their contemporaries, they would be more famous than they are.

The qualifications that all these Napoleonic leaders possessed in common were—personality, quick comprehension, self-confidence, energy, love of danger, and the knack of surmounting adverse incidents of fortune. Their presence in action represented a moral force that was the equivalent of a number of ordinary fighting men. These French leaders were self-taught, and few of them had any military education of any kind. Kellermann achieved fame at Marengo, and Mountburn at the Somo Sierre Defile. Both of them had the cavalry flare and might have risen much higher under the Empire, but Kellermann's bad reputation in money dealings, and Mountburn's uncivil tongue and disobedience, went far to spoil their respective fortunes.

Murat

This son of an inn-keeper, who started life as a stable boy and became a Marshal of France and a King, gave such glory to the name of Murat that he is known to history by it and not by his royal title. His imprudence caused him to be shot as a guerilla; but he died, as he lived, a gallant cavalier.

He was a cavalry genius whose brain worked most efficiently on a galloping horse. He was a lion in battle, where his bravery and personality secured his fortune; but deprived of this stimulant, as when called on to guide affairs of State in the calm atmosphere of a Council Chamber, he failed through want of judgment, lack of loyalty, a firm will, and inherent foolishness and weakness with women.

Napoleon said of him, "He was a paladin in the field, but in the Cabinet destitute of either decision or judgment; he loved, I may rather say, adored me; he was my right arm, but without me he was nothing. In battle he was perhaps the bravest man in the world; left to himself he was an imbecile without judgment." "Murat and Ney were the two bravest men that I have known: Murat's character, however was nobler for he was generous and frank."

Murat was vain, swashbuckling, fond of extravagant clothes and fine horses. His showy uniforms, fine stature, beautiful seat on a horse, and the magnificent animals that he rode, made him a marked figure on that battlefield.

Self-confidence, a quick comprehension, energy and a disregard of danger were, however, his qualities in the field. "On arriving at deserted Moscow, he calmly moved through the city and took up the pursuit of the Russians towards Asia and the boundless plains of the East!"[4] He had no military education, his tactical ability was entirely instinctive.

Bessiers

Bessiers, Marshal of France, was a revolutionary volunteer who, attracting Napoleon's notice in Italy, became commander of his personal "Guides" and eventually the commander of the Guard.

He was a very able commander, very popular both in the French service and with foreigners. He accompanied Napoleon in the Egyptian Expedition where he won distinction, and was with him in "the Brumaire."

His brilliant charge at Marengo was second only to that of Kellermann; and in Spain he defeated the Spaniards at Medina del Rio Seco in 1808. In 1809, he held chief command of the cavalry during the Wagram campaign. In the Russian campaign in 1812, he originally commanded the Cavalry of the Guard; and from the desertion of Murat in 1813, until his death in action, all the cavalry of the Grande Army.

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[3] *History of Cavalry* by Colonel Denison.

[4] *History of Cavalry* by Colonel Denison.

His dauntless courage, loyalty, tact, composure, energy, cool judgment, caution, quickness of comprehensions, and natural cavalry aptitude were marked. A less striking figure than some of the other Marshals, he was a loyal servant and trusted friend of Napoleon; who wept at his death and said of him: "He was cool, brave and calm under fire. He had good eyesight, as a cavalry commander he was very clever and especially suited to command a reserve. He and Murat were the best cavalry officers in the Army."

LA SALLE

La Salle was the most renowned light cavalry commander of Napoleon's Armies. He had been deprived of his commission in the old Royal Army as an "aristocrat," but he enlisted in the ranks and by courage and ability gained a Republican commission in 1795, and rose to be a brigadier in 1805. In 1806 he was brought into prominence by his capture of the fortress of Stettin with six hundred hussars, and subsequently did well in Spain and became a General of Division.

He owed his promotion entirely to the talent and cavalry instinct which, when combined with experience made him an ideal leader of light horse. In him energy, self-confidence, quick comprehension, and determination were combined with a wild disposition, which in peace led him into mad deeds. Napoleon however knew his merits and told a complaining French Prefect, "My signature makes a Prefect, but it takes twenty years of war to make a La Salle."

He was killed at the head of his men at Wagram.

CURELY

This son of a poor peasant enlisted in 1793 and won a commission at Afflus in 1805 for the defeating of an Austrian cavalry regiment with twenty-five men. After La Salle he was about the best light cavalry officer of the Grande Army.

In 1809, as a squadron leader carrying despatches to the Viceroy of Italy, he, with only forty men, carried out a daring and effective reconnaissance right through the Austrian lines. At Polosk in 1812, with one hundred men, he captured twenty-four guns together with a general of the Russian Army. He was a colonel in 1813, and General of Brigade in 1814, but this promotion came late; had he come to notice earlier, he would probably have risen much higher. He rejoined Napoleon in 1815, retired after Waterloo, and was deprived of his rank in 1824.

De Brack emphasises the versatility of Curely who could be a "Vet," shoemaker, farrier, cook, baker, etc., as the occasion demanded. These however were minor qualifications, his strength lay in personality, courage, determination, and natural aptitude of knowing what cavalry could do.

GREAT BRITAIN

The British cavalry can be justly proud of its regimental officers, but its cavalry generals are little known outside their own country. In fact Rupert and Cromwell are the only English cavalry leaders with an international reputation; and Rupert was not a born Englishman.

CROMWELL

Cromwell was a remarkable man; not only was he self-taught, but his experience of cavalry and of war only commenced when he was well over forty. His boldness, energy, keen eye, judgment, quickness of decision, zeal and fire of disposition were marked; and these combined with religious fanaticism, gave him "The Sacred Fire" which Napoleon considered was the essential qualification of any general.

His greatest assets, apart from his instinctive tactical ability, were his personality and the influence over the men he led.

While he was not a scion of one of the ancient English families, he had the advantage of being a wealthy landowner with a seat in Parliament; in those far off days members of Parliament possessed a great prestige out of proportion with that of modern times.

RUPERT

Had Rupert not been opposed by a Cromwell, he might have gone down to history as invincible. He had all the characteristics of a great cavalry leader except prudence and foresight. His hot-headedness, combined with failures to maintain reserves, or to rally after charges, resulted in his almost invariable initial successes being transformed into ultimate defeats. But while his judgment was at times at fault, the blame for the lack of reserves and for not rallying after attacks was not entirely his. He had to contend with the determination of the Cavaliers to provide themselves by plunder with the necessities of war which otherwise they had little means of obtaining. He had the advantage of being the King's nephew, and the disadvantage of being a foreigner unconnected with the local nobility.

Had he been able to instil discipline into the wild Cavaliers early in the war, the Parliament would never have obtained the time and opportunity to raise their new Model Army; and the King would probably have won the war in the first few months.

The lesson to be learnt from him, is—that a leader without, or unable to exercise, prudence and foresight, can only hope for success in so far as fortune generally favours the brave.

The two Commanders-in-Chief in France (Field Marshals the Earl of Ypres and Earl Haig) were both cavalry officers who can claim credit for the high efficiency of the British Cavalry at the outbreak of the war.

In South Africa (where French held command of the cavalry, and Haig was his Staff Officer), the cavalry in spite of their handicaps played a decisive part in Lord Robert's early victories. They, together with Lord Allenby, must be mentioned; but their international fame was not earned in command of cavalry, but of armies; also the leaders of the late great war are excluded from consideration. But when time has relegated to their proper perspective, the tragedies of the Static Warfare of the West and the victories of the mobile warfare of Palestine, Allenby will be awarded by acclamation the fame he deserves.

India has always been the only cavalry training ground where British officers obtain peace experience of great concentrations of cavalry. One Englishman (whose memory is preserved by an Indian regiment named after him), typifies many who have died unknown to fame. Hodson of Hodson's Horse was what Napoleon called, "A true General of Advanced Posts" and even more. And he an individual that people either loved or hated, and whose worst enemy was himself.

When the great Mutiny broke out, this infantry subaltern of the Honourable East India Company was in disgrace. He had been reverted from semi-military employ (with the famous Corps of Guides) to regimental duty. But, amongst the martial classes of Northern India he had during his service with the "Guides" made himself loved and respected. So at the time when prestige of the British had descended to its lowest ebb, he, as an individual, was able to raise two regiments of Irregular Cavalry as personal retainers, from the semi-independent Punjab. These regiments played no mean part in repressing the outbreak; and as long as there is any Indian Cavalry, Hodson will remain one of its heroes.

His death in action at the age of thirty-five cut short what might have been a brilliant career. His personality, self-confidence, determination, horsemanship, quick comprehension, courage, energy, and ruthlessness so marked him out as a light cavalry commander, that, in a time of emergencies, his failings and shortcomings rightly were treated as of little account. His summary shooting of the Delhi *Shahzadas* destroyed the *morale* of every mutineer who heard of it; it has been treated as a crime principally by those who understand the least about such matters.

UNITED STATES OF AMERICA

Some of the cavalry commanders of the American Civil War were regular soldiers; but none of them had had previous practical experience or even any theoretical training in commanding large bodies of horsemen. Nevertheless, the defeated Confederates produced two great leaders—Stuart and Forrest; and the Federals, at least one—Sheridan. Besides these outstanding figures, there were others.

None of these Americans owe their fame as much to tactical ability, as to character, will power and personality; it was the confidence that they inspired in their followers that made them able to establish the custom of maintaining continual activity, when the easy and agreeable course for untrained and undisciplined mounted troops would have been to sit still.

They were not called on nor even able to lead thundering squadrons to victory; but their instinct revealed to them methods more suited to the men they led and to the character of the country in which they fought. However, they were invariably guided by the cavalry principles of Mass, Mobility, and *Morale*.

J. E. B. STUART

He was a graduate of West Point, and a subaltern in the regular United States Cavalry. He resigned to fight for his State, and was made—first a lieutenant colonel, and then major general of the Virginia Cavalry. He was a fine character, much beloved of all, who united the gaiety of a subaltern with the resolute character and genius of a great cavalry leader.

Colonel Denison[5] says: "Stuart was a most efficient cavalry officer, his energy and impetuosity were unrivalled, while his tact and promptitude of resource saved his command on many critical occasions. His power of obtaining information of the enemy's movements was extraordinary. His death in 1864 was an irreparable disaster to the South." We find Lee exclaiming, "Oh, for an hour of General Stuart!" Colonel Denison also says: "Stuart was the ablest cavalry officer that the war produced, unless an exception can be made in favour of General Forrest."

He was killed at the Battle of Yellow Tavern, where Sheridan defeated the Confederates; and his death was a loss to the South almost equal to that of Stonewall Jackson. Sheridan in his *Memoirs* specifically emphasizes what a calamity this was for the South.

FORREST

Forrest was a Tennessee backwoodsman about forty years of age, who lacked not only military training but a formal education of any sort. He had been by turns a cattle, horse and a slave dealer, a blacksmith, a real estate agent, and eventually a cotton planter; and in these various ways had acquired considerable wealth at the time the war broke out.

Enlisting as a private he was almost immediately made a lieutenant colonel, and in 1861 raised a regiment. In 1862 he became a major general; and eventually became lieutenant general commanding the Confederate Cavalry of the Army of the West. Well would it have been for the Southern cause had he been Commander-in-Chief in this theatre of War.

The operations in this area have not, as yet, had as much written about them as those of Virginia; and in consequence Forrest has not the international reputation of Stuart, although many consider him to have been the greater leader. Sherman considered him to be the most remarkable man whom the Civil War produced on either side; and the Confederate General Joseph Johnson said, "If Forrest had had the advantages of a military training he would have been the great central figure of the war."

His own description of his tactical methods was "to get there first with the most men." But this unconventional definition shows his grasp of the essential element of cavalry tactics.

He was a tall, big, grave, dignified, soldierly figure with small hands and feet. He had plenty of self-confidence and energy combined with quick comprehension, a determined will and a disregard of danger. He himself, like Murat, was "a lion in battle" and is believed to have himself killed at least thirty Federals in action; and he had innumerable horses shot under him. He had a fierce and savage temper and was not an easy subordinate.

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[5] *History of Cavalry* by Colonel Deniso

SHERIDAN

Sheridan, the best known Federal cavalry commander, was a graduate of West Point, but had not any cavalry experience when the war broke out. He was then thirty years old and a lieutenant of the regular infantry. He joined the volunteer cavalry at once, and his volunteer promotion was rapid; in 1862 he was a brigadier general, and in 1864 he was major general. Later he was made a major general in the Regular U. S. Army. In 1864 he was given command of the Cavalry Corps of Army of the North, and later the command of the Army of the Shenandoah. He justified the somewhat remarkable appointment of an infantryman to the command of a cavalry corps, by the extraordinary activity which he imparted to the Federal cavalry. He is a striking instance of innate genius, as his cavalry aptitude was entirely natural. Active, energetic, full of spirit, vigor and life, he combined brilliant courage with painstaking skill. Like many great soldiers he was very devout. He was full of personal magnetism and restless energy, but very prudent withal. Eventually he became commander-in-chief of the United States Regular Army.

Ashby, of Virginia (leader of Stonewall Jackson's cavalry), was a noted civilian horseman of reckless courage, possessing inborn cavalry genius and the personality that fighting men will follow. His death in action in June, 1862 (as brigadier general) was a disaster to the South which could ill spare such a man.

Mosby (one of Stuart's subordinates), with a few men used to spread consternation and dismay amongst Federal forces greatly superior in strength to his own. President Lincoln had a little joke, of lifting the cloth of the war cabinet table, "to see if Mosby were underneath."

Wilson, who shines mainly in the reflected glory of Forrest, was a staff officer of the Engineer Corps, who was given first, a division in Sheridan's Cavalry Corps, and later a cavalry corps of his own in Tennessee. Like Sheridan and Forrest, he had no previous cavalry experience; but, without being in any way brilliant, he proved a capable corps commander.

QUALIFICATIONS REQUIRED OF LEADERS

"A cavalry general should possess practical knowledge, know the preciousness of even a second of time, despise life and not trust to chance."[6]

"The use of Cavalry demands boldness and ability, above all it should not be handled with any miserly desire to preserve it intact." "The qualities necessary to a cavalry general are so varied, and so rarely found in the same man, that they seem to exclude one another. First it requires a pure keen eye, rapid and energetic action, but not to the exclusion of prudence for one error, one fault committed at the beginning of the movement is irreparable by reason of the short time required to execute it. The cavalry general should take care to shelter his men from the enemy's fire while they are only in position but not spare them, when the moment for the assault has come. On the eve of the battle and till the fight is actually engaged he should bestow on his men and horses the most minute care, and keep them up to their full strength: but when the moment has come he should use the cavalry without the smallest regard with the sole object of getting as much out of it as possible."[7]

"Up to the evening of the battle in which the cavalry are called on to fight, the general should exercise over men and horses the most minute care and attention. He should watch over their efficiency with the greatest solicitude; but at the moment of action should be capable of expending them without a thought of the losses he may be about to incur, being dominated by the sole idea of getting as much out of it as possible."[8]

The Marshal also points out the great difficulty in finding any one man who unites in himself these opposite qualifications.

"If you cannot sit your horse like a centaur, and have not the eye of an eagle, the courage of a lion and the decision of a thunderbolt—about turn! For you are not fit to command a hurricane of cavalry."[9]

De Brack, a light cavalryman, asks: "What are the principal qualities of a commander of light cavalry in the day of action?" and answers: "A correct judgment, a cool mathematical appreciation of the material of his own forces and those of the enemy. That rapid and unfailing *coup d'oeil* which takes it at a glance, and is assured of the *morale* of the troops that he commands, and of those he is about to attack. That glance which, no matter from which side he enters on the field of action, comprehends it at once as a whole, and in its minutest details of distances, natural advantages, possibilities and impossibilities, for attack, defence, and retreat. Promptitude and decision in action. An enthusiasm that carries all before it. That intrepidity which despairs of nothing, and which rallies detachments when in the most desperate conditions. That *sang froid* which never changes countenance, and enforces our subordinates to view matter with no eyes but our own: add to these qualities the bravery which gives the example, and the justice which munificently recompenses, and you have the man of a thousand, who, in all circumstances will have in hand a hundred squadrons, as if they were but one, halt them as though they were a single individual, carry off, or snatch the victory and command her as a handmaiden."[10]

"The mass needs and we give it leaders who have the firmness and decision of command proceeding from habit, and an entire faith to command as established by tradition, law and society."[11]

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[6] Napoleon's *Memoirs.*

[7] Napoleon's *Memoirs.*

[8] Marshal Marmont.

[9] General Foy.

[10] *Advanced Posts of Light Cavalry* by de Brack.

[11] Ardant du Picq.

"The influence of leadership is felt as much in the tactical work as in the strategical work, and it is a simple fact that at any moment in a campaign may arise, for a cavalry leader of any rank, a situation which, for its satisfactory solution, needs mental power and capacity not often called on in leaders of similar rank in other arms. It is to incapacity to rise to the mental requirements necessary that is due the painfully small proportion of opportunities utilized, to opportunities let slip, so noticeable in all the years of the past and hence the small esteem sometimes displayed to arms by soldiers and the neglect of it in peace time."[12]

Lord Haig, quotes Moltke as reporting "another and perhaps the strongest reason for the poor results obtained by cavalry on the battlefield lies in the characteristics of many leaders. With cavalry everything depends on the initiative of the commander, hence the immense importance of the personal element."

"There is nothing rarer than a perfect general of cavalry, the cavalry commander requires the rare combination of talent; he must have great prudence, which is always required in an officer holding a responsible post, and at the same time he must possess extraordinary rashness and bravery and combine the greatest calmness with the greatest impetuosity. All celebrated cavalry officers have been noted for the zeal, impetuosity, the fire of their disposition, and they have excelled each other only in possessing to a greater degree the caution and prudence necessary to a responsible degree of a responsible command. There may have been cavalry officers of reputation who have altogether lacked the caution, but there never was one with the slightest claim to that name who lacked the energy and the impetuosity."[13]

"The qualities requisite in the enemy's movements are a good eye for country, a quick one for the enemy's movements, great energy, courageous decision and rapid execution."[14]

"Born cavalry leaders are *rarae aves* and the same value cannot be attached to all cavalry generals who may happen to be of equal rank. The more force that can be concentrated under one able man the better." "As an example of the supreme command and the cavalry leader I would draw attention to the conduct of King Frederick and General Von Seidlitz in the Battle of Zorndorf. The King felt the necessity of restoring the wavering fortunes of the day by launching the cavalry to the attack, but Seidlitz independently chose the moment of the charge and success justified them both. When, however, in the Battle of Kunnersdorf the general was compelled to order the charge against his better judgment the consequences were a heavy defeat for the cavalry."[15]

"The highest attribute in a general is that he should be able to order the elements of disorder. War is the acme of disorder."[16]

"Cavalry is the arm of opportunity. A cavalry commander must not wait for chance to come to him, he must be ever on the lookout to make them for himself."[17]

"Leaders should possess especially the qualities of boldness, energy, initiative and decisiveness. There must be a deep understanding of the men they are to command and an ability to fire their imagination and be able to inspire confidence in them."[18]

"He who fears being conquered, is certain of defeat." (Maxim of Napoleon.)

Pass in review all the leaders one has known and how few would satisfy these demands.

CONCLUSIONS

No continent, race, colour or class can claim a monopoly of cavalry generals; princes and peasants, gentry and bourgeoisie have contributed their quota. Men of diverse opinions, of indifferent education, and of inexperience, have sprung from obscurity to fame. They have not all even served an apprenticeship in the lower ranks of the cavalry; novices drafted from the infantry or even from civil life have achieved fame.

Intellectual brilliancy has not been the mark of the cavalry leaders of history, and amongst them there are not included any reputed students of war. Self-confidence and determination to get their own way, were common to all; as without self-confidence and persistence cavalry leaders would lack the "sacred fire" which Napoleon considered indispensable to all who command. Theoretical or educational tests have played no part in their selection, neither tact nor undue deference to the ideas of others were their qualities, and they have usually been indifferent subordinates. Few if any could be described as conscientious young men who rose through industry and application.

Normally it is only during upheavals of society, that talent can carry men without influence to authority quickly. Napoleon said, "Revolutions are a fine time for soldiers of mind and courage." Revolutions are quick in sifting the wheat from the chaff; and during them capable men whatever their birth, if they have the luck to escape being murdered or executed, have a chance of rising quickly to authority. In revolutions men retain life and authority when their personality represents in practice the visions which the dumb mob vaguely feel, and are unable to formulate. Survival gives the habit of command and confidence in the right to exercise it, even to men of classes which are unaccustomed to the exercising of authority.

It goes without saying that any leader requires self-confidence, personality, quick comprehension, determination, energy, and prestige; and a striking appearance is a great aid to personal magnetism. A leader cannot outrage popular opinion, nevertheless he must not follow this like a sheep but must guide and formulate the sentiments of those whom he leads.

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[12] Lord Haig in his Introduction to *Cavalry Studies.*

[13] *History of Cavalry* by Colonel Denison.

[14] *Cavalry: Its History and Tactics* by Captain Nolan.

[15] Bernhardi.

[16] *Our Country* by Major General Rimington.

[17] Cavalry Training.

[18] *American Cavalry Manual.*

While the cavalry leaders of history did not achieve their fame through passing examinations, or through knowledge of doctrine and theory, and while cavalry leading has been and always will be mainly intuitive and instinctive, it would be a mistake to suppose that that talent is not improved by technique. Cromwell and Forrest succeeded in spite of their lack of training, not because of it.

All officers are better for the right kind of training; but the advantages of study as a form of training must not be exaggerated. The orders that leaders issue, the way they act in emergencies, and their explanation of plans, constitute an education to those who are able to learn; but theories, like wireless waves, are capable of transmisssion only to minds of a "responsive wave length!"

What of the leaders of the future? The men that they will lead, either in part or altogether, will be mounted on self-propelled vehicles. Will the leaders of such units require the qualities that are those of a leader of Horse?

General Fuller answers this for us when he says: "The more mechanical become the weapons with which we fight, the less mechanical must be the spirit which controls them."[19] Whatever the means of locomotion, the objects to be achieved remain similar; and it is logical to say that the qualities required cannot materially vary.

Let the leaders of the new mechanized cavalry seek their inspiration from those who achieved fame when leading men on horses.

Let them remember the counsel of Napoleon, "Union of your forces [Mass],[20] Activity [Mobility], and a firm Resolve to Die with Glory [*Morale*], are the three great principles of the military art which have made fortune favour all my operations."[21]

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Propaganda

"Propaganda is just as much a weapon as artillery or the chemical arm. It must not be regarded merely as a means of delivering a final blow to a shattered army, but as a weapon to be used immediately on the outbreak of hostilities as a natural phenomenon of warfare."

—GENERAL VON METZSCH, 1932.

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[19] *Generalship, Its Diseases and Their Cure* by Major General Fuller.

[20] Words in brackets are the writer's.

[21] Correspondence of Napoleon.

Lessons from Norway

An officer, well steeped in the military doctrines and organizations of Europe, recently commented upon affairs which transpired in Norway during the month of April. In particular was he impressed with the manifestations which emphasized the paramount need of balance in military planning. Norway should teach, according to his views, the lesson that there is a point of view on the employment of motors which must be compromised with the potential theater in which the armed forces of a nation may be required to operate. The solution lies not in a wholesale adaptation of motors or complete dependence upon animals, but in a reasonable and sensible balance.

In considering the Norwegian campaign the general aspect of terrain and critical objectives first must be clarified. According to *Life,* May 6, 1940, "The natural lines of communications between the seaport cities of Oslo and Trondheim, built on these fjords (the two principal ones) are two valleys called the Gudbrandsdal and the Osterdal. The coast is extremely formidable, and the fjords afford the only means of approach for ships. . . . It is thus clear that he who controls both Oslo and Trondheim is master of Norway, provided he can maintain himself and provided he can gain control of the valleys that link these two points. If he holds only Oslo, he may be attacked from Trondheim by an exterior enemy. If he does not have the central valleys, he cannot be secure either in Oslo or Trondheim provided there is an enemy of dangerous quality in the valleys."

The accompanying map brings out the main feature of the coastline of Norway and the main system of highways. The Oslo-Andalsnes and the Oslo-Trondheim roads follow the two principal valleys already mentioned. It is evident that the principal terrain features under these conditions are important road centers and commanding terrain. The road center in the area of Otta and Ringebu constituted one of these features. It is to be remembered that along the road in that area precipitous mountains on each side reach elevations of some 7,000 feet.

It is a reasonable supposition to believe that units intended for operations in this area should have certain particular elements. There ought to be highly mobile units capable of moving promptly forward and, operating well in advance, afford the slower moving elements sufficient time to close up, either by delaying the enemy or seizing and holding important terrain features. In the latter category there should be, primarily, elements capable of maneuvering in this type of terrain, once contact had been gained by appreciable units.

For an operation of this type the Germans depended upon highly mobile mechanized and motorized elements for the first mission. For later phases there was available to them an organized mountain division with pack artillery and the whole experienced in operating in this type of country.

Evidently, from available reports British forces possessed no elements comparable to the German mountain division. Practically the entire bulk of their cavalry had been reorganized as light mechanized units. Lacking other essential features, it was but natural to issue a call on the French Alpine Chasseurs, experienced mountain warriors.

An essential part of the German tactical doctrine may be found in the words of Major George Fielding Eliot in the same issue of *Life*. "The Germans applied the lesson they learned in Poland, the one great outstanding tactical lesson of this war; that any offensive operation on the surface of the earth must be coördinated with and supported by air operations if it is to hope for success against an enemy provided with air power of its own. Delaying action is all important. The Germans must not be permitted to seize Donbas before the Allies are able to take Trondheim."

Briefly, the two principal plans of operations were:

By expeditious action, German forces occupied Oslo and Trondheim. The remaining tactical necessity was one of tying together these two ports by occupying and controlling the two central valleys.

British forces landed at Andalsnes and Namsos with the primary objective of capturing and holding the port of Trondheim. With that port in their hands, together with adjoining air fields, operations could then be undertaken towards the ultimate reduction of Oslo.

In the narrow confines of deep valleys it is evident that any force successful in establishing a strong defensive position, could, under normal circumstances, delay a much larger force indefinitely; provided air power was on even terms. For decisive measures, feasible only through offensive action, there must be present a force capable of maneuver in this type of terrain. Properly organized, trained, and equipped cavalry could have rendered this service. Operating amid the wooded slopes of Norway's hills and mountains a cavalry force would have avoided any devastating attacks from the air and by operating against the flanks of a hostile force could have, and probably would have, rendered their position untenable.

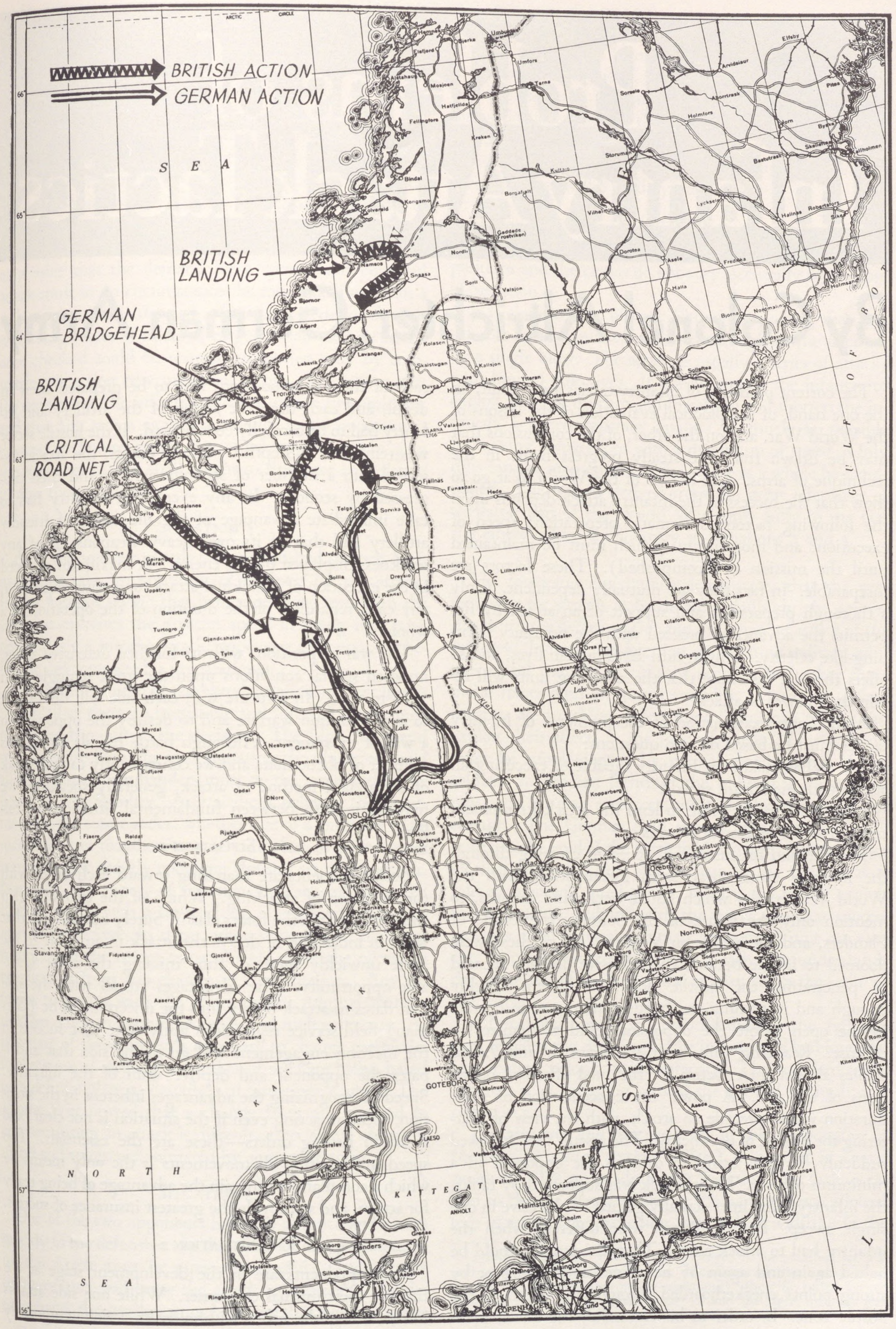
It was also pointed out that the prevailing opinion that the German Army is completely motorized is a misconception and misleading. The bulk of divisional transport in the German Army is animal drawn. The great strength of the German organization lies more in the powerful ground elements which are available to follow up and support mechanized elements. In that force is to be found a great dependence on animals. The speaker gave as his opinion that in the army of today all transport intended to function in front of the light artillery should be animal-drawn; preferably, such a rule might well be accepted for everything in advance of the medium artillery.

Essential lessons are:

Delay cannot be effected by pressure on the nose only; most effective results come from maneuver against flanks.

The modern road block, protected by fire, can be a formidable barrier to any force which does not resort to maneuver.

That air force is the most dominant factor in ground warfare of today. That there must be an inflexible regard for a sense of balance in the composition of any national force, reached only after a careful consideration of potential theaters of action.

BRITISH ACTION
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Stockholm
Goteborg
Copenhagen

Problems of Infantry Attack Tactics

By Colonel Altrichter, German Army

The current problems of infantry tactics are a result, on the one hand, of the practical evaluation of the lessons of the World War, and on the other, of the conclusions that may be drawn from the steady progress made in the technique of arms. The lessons of the World War go to show that the success of the infantry attack depends upon the following factors: systematic preparation; speed of execution; and momentum (which must be maintained until the mission is accomplished). These factors are inseparable. In fact they are mutually dependent. Only a thorough preparation and support of an attack by fire permits the advance to proceed with the necessary lightning-like celerity. This in turn saves human lives, and so offers the best insurance that the attacking units will retain their power of attack.

A thorough examination of the problems of infantry tactics must be based on two questions:

(1) What makes the infantry capable of executing an attack with maximum speed?

(2) What means serve to lend the attack its momentum up to the successful conclusion?

The demand for maximum speed in carrying through the infantry attack may seem incompatible with the World War battles which lasted weeks and months, to mention only the Battle of the Somme, the Battle of Flanders, and the attack on Verdun. All of these were doomed to failure because the offensive did not succeed in penetrating the hostile defensive system quickly enough and in gaining the freedom necessary to operate in the open before the opponent could reorganize his defense. Realizing this, both the German and Allied armies altered their tactics for the final offensive operations of the war. A power fire concentration of short duration would precede an attack, with the view of shattering the morale of the enemy. The assault then followed suddenly, its aim being to overrun the opponent in a minimum of time. If the attack was supported by tanks, the infantry sometimes actually gained its objective in one single sweep. But conditions were different when the infantry had to attack alone. Then the assault would be halted again and again by new lines of positions or by strong points checkerboarded through the depth of the hostile zone. In order to be successful, the attack upon each of these new positions had to be prepared anew in detail, and each time the action of the artillery and infantry had to be carefully coördinated. If the hostile sector was reinforced in depth by strong points, the attack dissolved into a number of separate actions and then progressed by sections. In any event, the infantry had to take immediate advantage of the fire effect of friendly artillery and that of its own heavy weapons, or of any weakness displayed by the enemy. A maximum of speed in the execution of individual attacks was thus required in any case, regardless of the duration of the operation as a whole.

The war of position, with its fortified defensive zones, imposed special conditions upon the great struggle from 1914 to 1918. In a future war, each side will do its best to avoid position warfare and to destroy the opponent in a war of movement. Although battle reveals an endless number of phenomena and we consequently cannot speak of a standard method of attack, generally speaking, we may distinguish between fundamental situations as follows:

Situation 1

Both opponents are marching toward each other with the intention of attacking. Which of the two will gain superiority when the forces clash? Surely not the side that waits in indecision or delays the attack in an effort to use some unwieldy method, thus missing the most favorable opportunity. The advantages are all with the side that dares to attack boldly into the uncertain. The (German) field service regulations aptly state that success in the meeting engagement will go to the side that anticipates the opponent and deprives him of the initiative. Speed in recognizing the advantages inherent in the situation, speed in acting even if the situation is not clear, and speed in issuing orders—these are the essentials. Top speed in executing all movements is the only means by which a commander can gain the advantage of being ready for action, and so provide the greatest insurance of success.

Situation 2

Both opponents are in the development stage at the time of their mutual encounter. While one side attacks immediately, the other withholds its action temporarily after the initial encounter. Here the principles of the infantry attack are the same as those for Situation 1. An attack executed with speed and determination is the best means of imposing action upon a hesitant opponent. The opponent, as a rule, will be unable to carry out his intentions according to plan if the attack—to quote a French officer who described the German attack of 1914—"overtakes the opponent like a storm, giving him no chance to gather his wits."

However, in order to avoid any misconception, we must emphasize that the demand for a speedy and powerful attack must in no circumstances be interpreted to mean a reckless plunge into the dark. The days are definitely past when long waves of riflemen surged ahead, and an attack once checked could be restored to motion only by committing to action new masses of troops. We realize that the problem of the infantry attack is now a fire problem; and that any attack against a morally sound opponent is doomed to failure unless the attacking forces can gain fire superiority. We shall return to this later and discuss it more thoroughly.

SITUATION 3

After the advance guards have established contact, both opponents take up positions in readiness for the attack. It goes without saying that here superiority rests with the side that exercises the greatest speed in going into position and, by a surprise attack, wipes out the opponent before he can complete his preparations.

The main essential of the three situations so far cited is that in all of them an irresistible and forceful attack must be carried through to the decision. The high command must exercise foresight in designating the objectives, and all subordinate commanders must do the same within the limits of practicability. Any artificial delay of the movement by the commander, whether due to a tendency to be methodical, or to adhere to a definite plan, or to any other reason, might gravely endanger the success of the attack. Naturally, the variety of situations in war is so unlimited that an attack with a far-reaching objective is often prematurely checked. In these circumstances both the commander and the troops must quickly draw the necessary conclusions from the change in the situation. Any attempt to go on with the attack in the original manner then becomes an extremely costly and useless process. At this state of the action it is necessary to change the tactics in the sense of striking a number of separate blows based on a definite plan, as described in Situations 4 and 5. The World War proved that a change from one method to another during an attack is difficult, especially if the command and troops are animated by aggressive spirit.

SITUATION 4

One of the two opponents halts his advance and passes quickly to the defensive. In this situation the preparations for the attack must be especially careful. Undue haste in preparation will cause the attack to miscarry. On the other hand, the attacker must be aware that every moment of time he loses will favor the enemy and give him time to reinforce his positions. Here, too, speed in the infantry attack is essential. The infantry should invade the hostile disposition the moment the friendly artillery has fired its last shell. Hesitation may mean destruction. For the defensive, silenced by the artillery barrage, is likely to revive as soon as the artillery ceases fire.

SITUATION 5

Here, the attack is aimed at a line of strongly fortified positions and the tactics do not vary essentially from those of Situation 4.

It is characteristic of both Situations 4 and 5 that as a rule the attack cannot be carried through to the decision by a single blow. The action is usually a series of attacks with limited objectives. It devolves upon the infantry to exploit all gains quickly and forcefully and shorten the intervals between separate assaults as much as possible by making preparations with a maximum of speed. Only thus can the momentum of the attack as a whole be maintained. The lessons derived from the great offensives of the latter part of the World War apply fully to the tactics employed by the infantry in Situations 4 and 5.

The foregoing descriptions demonstrate that the prerequisites for success in battle are unfailingly *the aggressive spirit, the will to attack, and the power of attack of the infantry*. Indeed, the foremost problem of military education and training in time of peace is to further these moral forces with all means available. The most perfect firearms are worthless unless the infantryman will or can exploit their effect on the field of battle. This training must be supplemented by mental development of the soldier. In modern fighting, the individual must often rely upon his own resources; mere blind obedience is not enough. The German field service regulations fittingly state that the void of the battlefield demands independence of thought and action on the part of the individual—soldiers who will intelligently, firmly, and boldly exploit every situation, imbued with the conviction that success depends upon every single man. A combat unit can execute its mission successfully only if each man understands the intentions of the leader and so may act in the sense of the whole.

All technical progress notwithstanding, the fighting man remains the deciding factor in battle. Therefore, the best soldiers belong in the infantry. The standard of its infantry is an unfailing sign of the general strength of a nation in war.

The initiative and independence of the commanders of the smallest units (section leaders) in combat is a vital problem. One must admit that a section[1] has little occasion to change direction within the narrow space allotted to it in action (not exceeding 100 yards in width). In the main, the attack will develop so that the rifle squads and light machine-gun squads, supporting each other, move straight ahead. Nevertheless, the section leader must invariably be assigned a combat mission. However simple his orders may be, he must understand the situation and must be able to make decisions and issue clear orders to his squads. These qualities of the leader must be carefully developed in peacetime training. The best method is to confront the section leader as frequently as possible with situations that allow him more freedom to make his own decisions and issue orders that he might enjoy later in war. Thus he will find war conditions simpler than those to which he has become accustomed in peacetime training. There is no doubt that a leader of a small unit who is schooled in this manner will be a better man and will be able to act with greater speed and precision than one who is suddenly faced by an avalanche of difficulties which he has not the slightest conception how to meet.

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[1] *Translator's note:* The section *(gruppe)* is the smallest tactical unit of the German rifle company. It consists of: the section leader; the squad leader (second in command); the rifle squad (seven men, not counting the squad leader); and the light machine-gun squad (four men, one light machine gun).

The method of issuing orders is also important. In war of movement, with its rapid changes in situation, an oral order based on direct observation of the terrain is preferable to one based on the map. Likewise, brief fragmentary orders are better than long ones which encompass the entire action. The order of issuing orders depends upon the time required by the various units to get ready for the attack. Orders must be issued first to the unit which takes the longest time, and the unit that can get ready with the least delay must receive its orders last. In a meeting engagement, the regiment is the smallest unit whose commanding officer issues written orders based on the map. Battalion commanders, not to mention company and platoon commanders, normally issue oral orders based directly on the terrain. This speed and flexibility in issuing orders constitutes one of the greatest advantages of the German command method—care must be taken to preserve this advantage. Commanding officers, down to the company commander, issue written orders only if time permits; that is, in the case of a carefully regulated plan of attack and fire, the details of which are to be executed at definitely prescribed times.

The speed of the attack depends largely upon *the mobility of the individual infantry soldier.* In order to raise this mobility to a maximum, the soldier must be relieved of all superfluous weight. His clothing, equipment, and armament must be as light and comfortable as possible. The rifleman with a heavy pack on his back is out of place in modern combat which imposes the highest demands upon his physical activity—he is definitely a thing of the past.

It has already been mentioned that, according to the German concept, the attack problems of the infantry are *fire problems.* The development of the organic assignment of arms has gradually led to the replacement of the purely infantry units of former times by mixed units. A comparison of the organization of a modern infantry regiment, battalion, or company, with that of 1914 clearly reveals the course taken by this development. It is doubtful whether the development is final, for there are still a number of problems to be solved.

These include the question of *the organic assignment of an artillery battalion to the infantry regiment.* An organization of this kind may be objectionable from a standpoint of training, but tactical considerations make it advisable. At present, the infantry regiment must usually rely upon teamwork with a battalion of artillery. But, this condition is not quite satisfactory, for the artillery battalion, regardless of how closely it coöperates with the infantry, remains under the orders of the artillery commander. At any time that commander may assign missions to his battalion which are contrary to the wishes of the infantry commander. This danger is especially serious if the artillery commander is a very determined type of man and the division artillery as a whole is weak. All of these difficulties could be eliminated by the organic assignment of an artillery battalion to the infantry regiment. This solution is recommended also for psychological reasons. In passing, it is well to mention that the organic assignment of artillery battalions must not be made at the expense of the division artillery.

It would be a mistake to regard *the heavy-weapons company of the infantry regiment* as a type of artillery. The heavy-weapons company neither carries out artillery missions nor is it handled according to artillery principles. The commanding officer of a heavy-weapons company at no time exercises the technical conduct of the fire of his guns in the sense of a battery commander. Instead he assigns missions to his platoon commanders, and they become responsible for the execution of their missions. That is, they reconnoiter the observation posts, gun emplacements, and location of the targets, order the employment of the platoons, and conduct their fire. Even if several platoons of the heavy-weapons company are sometimes employed under the direction of the company commander, the gun positions of the several platoons are invariably separated as to space.

Experience has proven that an infantry battalion cannot dispense with high-angle firearms in the execution of an attack. For this reason heavy-weapons platoons are normally attached to attacking battalions. Using indirect aiming methods, the heavy weapons fire upon targets within the hostile infantry zone out of reach of the machine guns and mortars, which the artillery cannot see or reach because of the great dispersion of its fire. These are targets which are usually intrenched or otherwise well concealed so that only observed fire can be effective against them. The regimental commander may employ elements of the heavy-weapons company, not attached to the battalions in the front line, to reinforce the fire at the point of main effort. In view of the fact that the infantry battalion absolutely needs the high-angle fire of the heavy weapons for the attack, we may pose the question whether it might be more advisable organically to assign a platoon of heavy weapons to each battalion of infantry. This solution would automatically follow, if the infantry regiment were reinforced organically by a battalion of artillery.

Quite different from the employment of the heavy-weapons company is that of the *antitank company of the infantry regiment.* A distribution of the antitank company by platoons among the battalions for the attack would simply dissipate its effect. The regimental commander must employ his antitank company where a hostile tank attack is most likely to occur or where it would be most dangerous. Owing to their short range, antitank guns can accomplish their task only by following closely behind the forward elements of the regiment. The company commander must be adept in the employment of his platoons, for the platoon commanders can meet the requirements of the ever-changing terrain and act independently in the sense of the whole only if the company commander assigns them far-sighted missions. A diligent exploitation of the terrain is of vital importance to the antitank platoons. Lack of precaution in the employment of their guns is bound to be fatal, for they present targets of considerable size when they are operating in the forward zone of the infantry. Antitank platoons are placed under the orders of the lower commanders within the regiment only when they form a part of a security detachment for a bivouac area, when they are on outpost or with the advance guard, and when they are taking part in delaying action and in pursuit. Antitank guns use only direct aim. The gun opens fire only on oral orders or visual signals of the platoon commander. Once the platoon commander has given orders to open fire, each gun, within its respective sector of fire, fires independently as the gun commander directs. This is absolutely necessary in view of the high rate of speed of the tank targets.

The organic assignment of *a company of engineers* to the infantry regiment is a moot question. While World War experience in this respect is largely based on a war of position, it speaks in favor of the organization of such a company. However, in a war of movement the need of an organic engineer company is less essential. But it would be a mistake to conclude from this that the pioneer squads of the rifle companies can take the place of an engineer company. To detach the pioneer squads from their companies and combine them for the purpose of using them as combat engineers would impair the power of attack of the rifle companies. Besides, the pioneer squads as such will probably disappear with the first major losses in action.

The last 300 yards in front of the enemy have always been the great obstacle to attacking infantry. Considerable progress toward the solution of this problem has been made by the assignment of heavy and light mortars to battalions and rifle companies. Combat at close range does not permit support by artillery, and heavy weapons and the rifle companies must rely upon their own resources. In the days when the rifle companies had no organic high-angle firearms at their disposal, their task was often well-nigh impossible if the opponent was of sound morale and well-concealed and intrenched. The introduction of heavy and light mortars brought about the first change in this respect. With the mortars pinning down the enemy, the companies in the front line now can worm their way forward to a line from which they may take the hostile defenses by assault. The assignment of mortars to the infantry is of inestimable importance.

However, *the assignment of heavy machine-gun sections to the rifle companies is of equal importance.* Its twofold advantage is that the company commanders can use these machine-gun sections for fire concentration, and that the battalion commander is not required to attach heavy machine guns of the machine-gun company to the rifle companies for that purpose. The rifle company's heavy machine-gun section supplements the fire of the light machine guns at longer ranges, and it fires on targets immune to the fire of the light machine guns. Using only direct aim, these heavy machine guns must operate far forward and maintain close contact with the advanced elements of the company. This is especially essential just prior to the penetration of the hostile disposition. On the other hand, one must admit that the assignment of a heavy machine-gun section and light mortars to the rifle company (heavy mortars are also placed under the orders of the company commander in action) renders the training and command of the rifle company more difficult. Yet it would be wrong to overestimate the difficulties and conclude that these weapons should be taken away from the rifle company.

Equally mistaken is the view that the assignment of heavy machine-gun sections to the rifle companies has rendered the battalion machine-gun company superfluous, and that a single regimental machine-gun company is enough. This would involve a fatal debilitation of the fighting power of the battalion. Moreover, it would be contrary to the transformation from pure units to mixed units mentioned above, and would have most adverse consequences—which holds true of anything opposed to the natural trend of development. The battalion commander must be in a position to call on his own machine-gun company for the purpose of organizing a fire concentration at the point of main effort. If only one regimental machine-gun company were available, we can rest assured that it would invariably reach the proper place too late.

The fire action is based on the systematic regulation of the fire of all arms which, in the attack in war of movement, stems from the combat and special fire assignments. One must always bear in mind that careful teamwork between the light and heavy weapons of the infantry is essential for any advance. High-angle and flat-trajectory fire must be closely coördinated. While the heavy weapons and mortars of the infantry contain the enemy as long as he is behind or under cover, the light and heavy machine guns open fire when the enemy shows himself in the open. The hand grenade wipes out the last vestiges of resistance.

If the attack is directed against an enemy in defensive positions, the battalion commander must regulate the activity of the weapons under his command by means of a fire plan in which times and places of fires are fixed in detail. The fire plan then must be coördinated with the combat missions of the artillery. It must cover not only the forward elements of the opponent, but must extend into the depth of the hostile defensive zone. The limits of the fire plan are prescribed normally by the field of observation open to the various types of weapons. If the attack is made by bounds—that is, from one objective to another—the primary function of the battalion commander consists in renewing the fire plan and putting it into effect prior to each advance.

The high rate of fire of modern weapons, combined with the limited supply of ammunition available in mobile warfare, does not permit prolonged fire actions. Therefore, *closest concentration of fire,* both as to time and space, *is characteristic of modern fire tactics.* The more sudden the hurricane loosed by the guns and the less prepared the opponent is for it, the greater the moral and material success will be. The element of surprise is a decisive factor in gaining fire superiority. In practice, the realization of this fact causes surprise fire to be delivered whenever possible. The demand for achieving surprise effect does not confine itself to artillery fire, but applies also to the heavy and light weapons of the infantry, down to the rifle.

It would be contrary to modern infantry tactics to have the riflemen open fire at long ranges, with the idea of gaining fire superiority by slow and well-aimed rifle fire. The struggle for fire superiority must be fought by the automatic weapons. Covered by them, the rifleman works his way forward to the opponent. The question arises: When shall he open fire? There can be only one answer: As late as possible. Normally, the rifle squads open fire at close range, and then only if it is absolutely necessary for further progress. It would be ideal if the protective fires of the heavy weapons and the artillery were so greatly superior that it would permit the rifleman to close in on his opponent without firing a shot. That is hardly feasible in practice, however. The riflemen as a body only enter the fire action shortly before their invasion of the hostile positions, when the reserves are closing in for the assault. Then they cover the enemy with well-aimed rapid fire in order to break completely his will to resist.

The rifle squad and the individual rifleman, when taking part in the fire action, should preferably fire from cover and try for surprise effect. Making all of their preparations under cover, the riflemen must suddenly bob up and quickly deliver their fire; and the squad leader may order the number of rounds to be fired. The calm fire action with the rifle is a thing of the past. With it has disappeared the old teamwork between riflemen: "You fire, while I observe." The modern rifleman must be trained systematically in rapid fire. Whenever he is not firing or crawling forward, he must take full cover. At no time must he stay in a position where he presents a target to the enemy.

The light machine-gun squad follows the same principles in opening fire. Here, too, the question arises when to open fire. Like the rifle squad, the light machine-gun squad opens fire at the latest possible moment; that is, only when the rifle squad needs the protective fire of the light machine gun or an unusually favorable opportunity presents itself (flanking fire). The teamwork between the light machine-gun squad and the rifle squad presents a difficult problem if the two squads have become separated by a considerable distance in the course of the attack. Although all kinds of exaggerations in this respect may be observed in peacetime exercises, in war the question of the greatest distance permissible between the two squads usually resolves itself. Since the light machine gun is limited to fire between gaps, its distance to the rear must be smaller than the gap is wide; otherwise its fire will endanger the men of the rifle squad. Likewise, the necessity of combining the two squads under one command imposes great limitations upon the interval between them. The maximum interval between the rifle squad and the light machine-gun squad in a fire fight may be assumed as not exceeding ninety yards, although this may at times be greater on open ground without cover.

In contrast to the French concept, the German regulations oppose all systematic procedure and rigidity in infantry combat. The French regulations prescribe for the platoon, company, and battalion, a number of different formations to be employed under given tactical conditions. Formations other than those prescribed by the regulations are banned. True, it is easy to learn tactics with the aid of such a scheme, especially as regards the training of reserve officers in methods of command. But this can be dangerous; for in troop training the form is apt to receive greater attention than the content, with the result that the system becomes an end in itself. All systems founder eventually on the merciless reality of war. Combat involves an endless variety of situations. The art of leading troops, down to the section, consists in recognizing the true situation in each instance and in issuing the most appropriate orders. In appreciation of that fact, the German regulations avoid imposing the fetters of rigid form upon the leaders. It is characteristic of the German regulations that they teach, above all, principles, conceptions, and directions which the leader must convert into action according to the circumstances. There is no doubt that this procedure makes the highest demands upon the intelligence, will power, and sense of responsibility of the leaders. In Germany we set these high requirements deliberately, in order to develop a body of leaders whose mentality and capacity is of the highest standard.

The infantry training regulations teach but few formations with numerical limitations. There are the "platoon wedge" (platoon in echelon; one section in front, the other two in the right and left rear at 100 meters' distance) and the "platoon broad wedge" (platoon in inverted echelon; two sections in front, interval 100 meters; third section in center rear, distance 100 meters). The company uses the "company wedge" (company in echelon; one platoon in front, the other two platoons in the right and left rear at 150 meters' distance) and the "company broad wedge" (company in inverted echelon; two platoons in front, interval 150 meters; third platoon in the rear and center, 150 meters' distance). However, platoon and company commanders are by no means bound to adhere to these formations. Their purpose is solely to accelerate deployment. The infantry training regulations give no maximum or minimum widths of the zones to be occupied by sections, platoons, and companies in the attack. The regulations prescribe no formation whatever for the battalion. Only one figure is given, and that with reference to the breadth of the battalion zone in the attack; namely, between 400 and 1,000 meters. There are neither formations nor figures for the organization of the regiment in the attack.

Soldiers of other nations might be surprised at this freedom which the German regulations grant to leaders in the selection of means and methods in the attack; and they might find it difficult to understand. A nation reveals its psychological nature in the methods which it pursues in solving its combat problems. The German concept of the problems of the infantry attack can be readily understood by all who have the slightest mental contact with Germanic logic.

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Preparation

In discussing war and pestilence *Time* magazine, April 29, 1940, carried the following comments:

> "In Europe's bloody wars, for every ten men slain by the enemy, pestilence has killed its thousands. . . . On Napoleon's retreat from Moscow typhus, dysentery and pneumonia killed 450,000 out of the Grand Army's 500,000 men. . . . In 1914 typhus swept through Serbia, spread to Russia, where in four years it killed 3,000,000 people. . . . Although there is no effective remedy for any of these diseases, all can be prevented by sanitary precautions. Prevention is simple: 'No lice, no typhus.' Also louse-borne is trench fever, a milder relative of typhus. . . .
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> "When the Germans moved into Poland last fall, they lugged with them portable shower baths (complete foresight and preparation), ran farm motors to make steam for delousing Polish prisoners. Because of these thorough precautions, these has been no large-scale typhus epidemic in louse-ridden Poland, although the disease has flickered there, as it has in China, for many years. . . . Nor have the Finns been plagued with typhus. Bi-weekly steam baths are their chief protection."

THE ORIGIN OF POLO

By Tommy Wadelton, Jr.

Polo is a game that is played by rich men and army officers. It is played with sticks that look like wooden hammers with long handles and big wooden balls. There are four men playing on each side and are called a team. There is a goal post at each end and the idea is to get the ball through the other team's goal post. If you get it through your own it is called a safety and counts for the other team. You have to be smart and quick-minded to play polo. Ladies play polo, too, but I never saw any.

It is very exciting. The men who play yell and sometimes they swear. It is not polite to notice that they are swearing.

In China twenty-six hundred years ago Chinese men and women with long pig tails and kimonas rode Mongolian ponies and knocked a ball around with crude sticks to the tunes of Chinese music. That's how Polo started. I read it in a book.

Persia was the first place where they played it like a game. The Chinese just played it for fun at parties and things and did it slowly.

After a while the English Government sent Cavalry regiments to India and they learned the game from the Indians. I guess the Indians learned it from the Persians. I don't know. When the English Officers went back to England they taught other persons to play it, and after a while they had enough persons to play contest games. My father read me a story about a polo game that I think is swell. Once there was an English regiment that was very honorable and had a good name for being on the level and doing good work. Whenever there was something tough to be done they sent this regiment to do it. This was a long time ago before the Indians trusted the English Government very much.

The Indians thought the English were just trying to steal their land and be their boss so they made raids and killed every one they could and drove off horses and were pretty mean and tough.

There was a very noble prince that loved his people, and did he hate the British because he thought the British were trying to grab everything and give his people a bum steer. He got together a great army and took them high up in the mountains where he could train them to be good fighters. To get up to this mountain you had to go through a pass that was so narrow only two horsemen could go through together. More and more Indian persons kept going up to the Prince, because they were afraid of the British, until he had about ten thousand men and their wives and families. He made them all work at plowing and milking cows and taming wild fruit when they were not drilling learning to be soldiers. Every night when they stopped working the Prince talked to them about how the British were their enemies and they should get them all killed off as soon as they could, then they could all go back to their homes and be comfortable again. I don't know how he talked to ten thousand persons because they did not have loud speakers then but he managed some way or other. Every once in a while they would raid and burn down houses and kill off all the persons they could and raise hob generally. The English would try to catch them and chase them up to the mountain, but they could not go very far because the rest of the Indians would get up on the hills and roll stones down on them and shoot them from behind rocks. Well, the English were worried most to death and did not know what they could do because their best officers and men kept getting killed.

There was a Captain sent out to the regiment and no one liked him very much because he did not go to the parties and sat around by himself and drank brandy and soda and did a lot of thinking. The rest of the regiment thought he was kind of goofy and would not bother with him at all but he was the best polo player they had, so they treated him with civility. He was always snooping around and being a lone wolf, but his men liked him a lot and would follow him to hell if necessary.

The Captain got an idea that he could go around the back of the mountain where the Prince had his army hidden and sneak up there and trap him. He tried to talk the Colonel into letting him do it, but the Colonel just poo pooed the idea, and besides, he did not like anyone to tell him how to do things. I guess no Colonel likes to be told how to run his business.

One night the Indians made a raid, and they did an awful lot of damage and drove off some swell horses. The regiment chased them but everything was helter-skelter and it was very dark besides. The regiment straggled back without catching anyone and next day at roll call they were all present or accounted for but the Captain and his troop. They were gone.

When the Captain was helping chase the Indians he thought, "Oh Heck, this won't get us anywhere. We'll just chase them so far and then have to go back or they will throw rocks." He thought maybe that was his chance to go get the Prince, and he asked his men how about it and they were with him to the death. He took them around back of the mountain and up a path and over all kinds of rocks where there was scarce footing for the horses. After a while they could see the place where the Indians were hidden a long ways off. They left the horses there, tied up so they would not snort and give them away, and started crawling along on their bellies and skulking behind trees and every thing. When they were pretty near they got together and made up a plan. They talked in whispers. They were going to sneak up on the Prince and catch him and then they were going to take him out and show him to the Indians and tell them if they did not do what they were told to do, or if they harmed the soldiers in any way, they would put out the Prince's eyes and cut off his hands.

Well they waited until it got dark and then they went wiggling along the ground without a sound, and they got up to the palace where the Prince lived. The Captain picked out his ten best men and he told the others to hide under the porch until he yelled for them. They sneaked up to a window, and there was the Prince sitting on his throne. They were just going to jump in and grab him when the Prince got up and came over and opened the window. He smiled very nicely and said, "Won't you come in gentlemen?" Did the Captain and his ten men feel sheepish! It seems the Prince's spies saw the English when they first started up the mountain, but the Prince said "Let them alone," and they let them alone. The Prince clapped his hands three times, and the Captain thought, "Here go some Englishmen," and he felt very apologetic to his men for getting them in trouble because he expected they would be boiled in oil or tortured by some refined Indian cruelty. Well, a crowd of slaves came running in, and the Prince told them to take the Captain and wash him and dress him up because he got pretty dirty crawling around in the dust and rocks, and he told them to take the soldiers and fix them up, too, with good food and music and Indian girls for amusement. The Prince sat him down to fruit and rare wines and fried chicken, and was the Captain's face red because he had come there to kidnap the Prince who was treating him like a gentleman.

Next day the Captain said they had a nice time but he thought maybe they ought to be getting back because the Colonel would be worried about them. The Prince said would they so soon deprive him of their pleasant company, and he guessed maybe they better stay for a couple of days more, and if they were worried about the horses they left, not to, because they were safe in the Prince's stable. Well, they stayed a couple of more days, and when the Captain said something about going the Prince made more polite excuses why they should stay, and the Captain began to feel the iron fist in the velvet glove.

They stayed a couple of more days with feasting and native dancing. The soldiers were having fun all right, but the Captain thought he'd better have a showdown, so he said to the Prince were they prisoners, and the Prince said no, no, they were his honored guests even if they did come sneaking up on him. The Captain said they liked being honored guests fine but enough was enough and his duty called him back to the regiment. The Prince said no, his duty did not call him back because the regiment thought he was dead. The Prince had a lot of spies around the regiment and knew what was going on.

The Prince told the Captain that he was going to kill all the English he could because he wanted them all driven out of India, and the Captain said "no can do" when the English put their foot in a country no one was able to get the foot out.

The soldiers were getting pretty fat and lazy just hanging around having fun, so the Captain started drilling them again and giving them duties and all that, and he got up a couple of polo teams to keep them exercised, and the Indian soldiers showed them how to be better players. The Prince liked the way the Captain drilled his men, so he asked the Captain to drill his army, too, and the Captain thought that was a good joke to show the Indians how to be better soldiers so they could do a better job of killing the English, and he said no thanks he would not do it. The Prince and the Captain got to have respect for each other, and if they had not been enemies they would have been friends. The Captain told the Prince that the country would be better if the English took it over, but the Prince could not see it like that. He was a very proud man. After a while they made a kind of bet. None of the Soldiers had played polo before—just the Captain who had learned it at another station when he first came to India. The Captain said he'd get up a team and work on it for a month, and after that they would play the Prince's team, and if they could win three out of five games would the Prince let them go back to the regiment? The Prince was a good sport, and he said all right he would, and he said, "If you win four out of five games I'll go with you and make peace with the English." The Captain told the soldiers that if they ever wanted to get back to the regiment again they'd better practice like the dickens. Well, the day came when they played the first game, and the Indians trimmed the pants off the English. That night the Prince said, "I'm sorry, my friend, that your great pride is hurt, but I am glad too because I love you like my brother, and I want you to be my bosom companion always." The Captain said that was pretty swell of the Prince but not to count his chickens before they were hatched and all was not lost yet. The next day the English won, and the Captain said, "How about it now, Your Highness? And the Prince smiled an Indian smile and said that was for courtesy, but the next day the English won again, and they won the four games, and the Prince was upset and did not see how they could do it because the Indians had been playing all of their lives and the English had just learned how to play. The Prince thought maybe the English were smarter than he had thought they were and would help India better than he could, and anyway, he had given his word, and Indian Princes are famous for being honorable gentlemen; so he could not back out if he wanted to because he would lose his virtue if he did. He let the Captain take him back with him under a white flag of truce, so they would not be shot by mistake, and the Captain and his men came riding home gallantly and were heroes.

The Prince made peace with the English and went back and packed up his clothes and brought back his people, and the men became the first Indian Regiment in the service of the Queen. I don't know what they did with the Indian Ladies.

The Prince and the Captain were buddies all their lives and went elephant shooting and other dangerous pastimes and had all kinds of fun.

A man named Mr. James Gordon Bennet went to

(Continued on page 271)

Portee Cavalry

An Experiment with Commercial Trucks

By LIEUTENANT L. W. CRAMER, 14th Cavalry

The following experiment in the use of commercial transportation for portéeing horse cavalry may be of interest to the mounted services.

On the 22d of October, 1939, the 1st Squadron, 14th Cavalry, was ordered to proceed, without delay, from Fort Sheridan, Illinois, to Camp Custer, Michigan, for intensive field training. This movement was to be made by rail, but it occurred to the Squadron that it was an excellent opportunity to test the use of commercial motor transportation. As there was no known case, at that time, of a cavalry unit being transported by commercial truck, it was purely an experiment, but it was considered valuable from the standpoint of training and as a test of the availability and efficiency of civilian transportation methods. The plan was therefore recommended to the Commanding General, Sixth Corps Area, and was readily approved.

Loading

The procurement of trucks proved to be no problem. After calling for bids from three responsible firms in the Chicago area, the contract was let to the Clark Trucking Company of Oswego, Illinois. The original plan was to transport the whole Squadron by commercial transportation, but at the last minute, only the horses were transported, the personnel and baggage being moved in government trucks.

On the appointed day, fourteen vans were assembled in the stable area before daylight, and the first glance at this nondescript caravan was hardly encouraging. The trucks, all of the semi-trailer type, were of every known make and design—some new, some ancient, some constructed for horses, but the majority designed for hauling cattle, sheep and hogs.

The trucks were backed up in line against the small natural bank in the vicinity of the stables. This decreased the angle of incline of the ramps, but no special facilities were prepared. Since Mr. Clark had contracted to effect the movement and had made his own insurance arrangements, he preferred to have all loading done by his civilian drivers, requesting that the troops merely lead the horses to the area of the trucks and turn them over. These civilians were all men with many years experience in handling livestock, and the loading was expertly accomplished. It is obvious that experienced Cavalry soldiers could do as well, but the efficiency of these men emphasized the importance of having specially qualified loading details. It was amazing to note how few horses offered any objection to doing a tight rope act on narrow, shaky ramps. In entering these narrow sheep gates with an overhead bar, the horses were not only required to lower their heads, but some of them actually had to bend their knees to clear their withers. The few horses offering resistance were handled patiently and were quietly coerced by men standing on either side and locking arms in rear of the horse. No wings or special equipment other than the truck ramp were used. The 178 horses were loaded in one hour and fifteen minutes, during which time the soldiers not handling horses were loading the impedimenta and baggage. The convoy therefore was ready to move when the last horse was loaded.

Movement

In order that the maximum training benefits might be derived, it was decided to have all trucks organized into a military convoy. The order of march was as follows: Troop "A" personnel, Troop "A" baggage, Troop "A" horses; Troop "B" horses, Troop "B" baggage, Troop "B" personnel. This placed the horses in the center of the column, with Troop "A" just in front and Troop "B" just in rear of their respective horses. This system was satisfactory, and the advisability of having the troops close to their own horses was emphasized when a sudden snowstorm forced us to halt on the road and cover the vans with tarpaulins. The only difficulty caused by the mixed column was that civilian traffic was not inclined to recognize any of the civilian vans as a part of the government convoy, and several accidents were narrowly averted.

The weather was very bad—snow, sleet, and very slippery roads—but the 230 miles were covered in ten and one-half hours running time, with about one hour lost in covering horses and serving hot coffee and prepared lunches at noon.

Unloading

Due to the short amount of daylight at this time of year, the Squadron arrived at Camp Custer after dark. The unloading was accomplished, however, in forty minutes on flat terrain, and a careful inspection of all horses did not disclose any injuries or accidents as a result of the trip. In fact, all horses were in fine condition the next morning.

RETURN

The Squadron returned to Fort Sheridan on December 2d using the same transportation. Loading this time was done before daylight with the aid of two overhead electric lights. Only flat ground was available, and a couple of the ramps were so steep that the horses were reluctant to enter these trucks. This problem was promptly solved, however, by using one of the vans having a side door, which we placed adjacent to the gate of the difficult trucks. Horses were led into the side door truck and transferred into the second truck without any difficulty at all. This made the loading slightly slower, but it was completed in one and one-half hours.

On the return trip, the horse vans, because of their different rate of speed, were released to make the trip independently of the military convoy. Mr. Clark chose a shorter, although more congested route, and completed the trip of about 200 miles in eight and one-half hours. An advance detail of soldiers had been sent ahead to Fort Sheridan the day before, and they unloaded the horses upon arrival in thirty minutes. All horses again arrived in excellent condition, without a single injury.

RESULTS

Whereas no great mysteries were uncovered regarding the handling of Cavalry by portée methods, certain points were clearly illustrated.

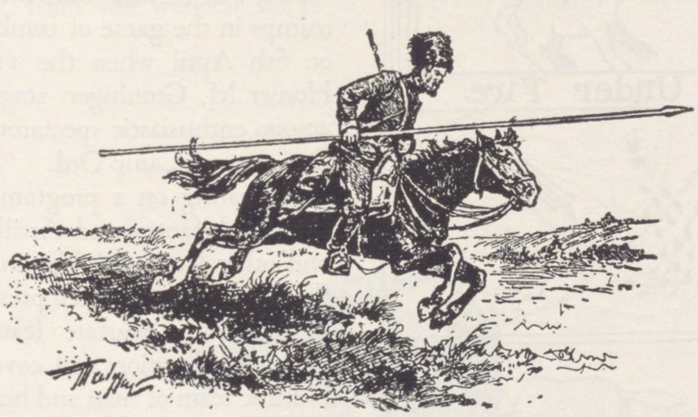
(1) It is a simple matter to place horse Cavalry, by use of motors, just as close to the actual field of battle as can be done with foot troops.

(2) This can be done without specially designed equipment, and is possible with the average commercial van, which can be found in large numbers in any of the large business centers.

(3) It is possible to requisition, in the vicinity of any large American city, a sufficient number of commercial vans to transport efficiently a brigade of horse Cavalry, without any special preparation or delay.

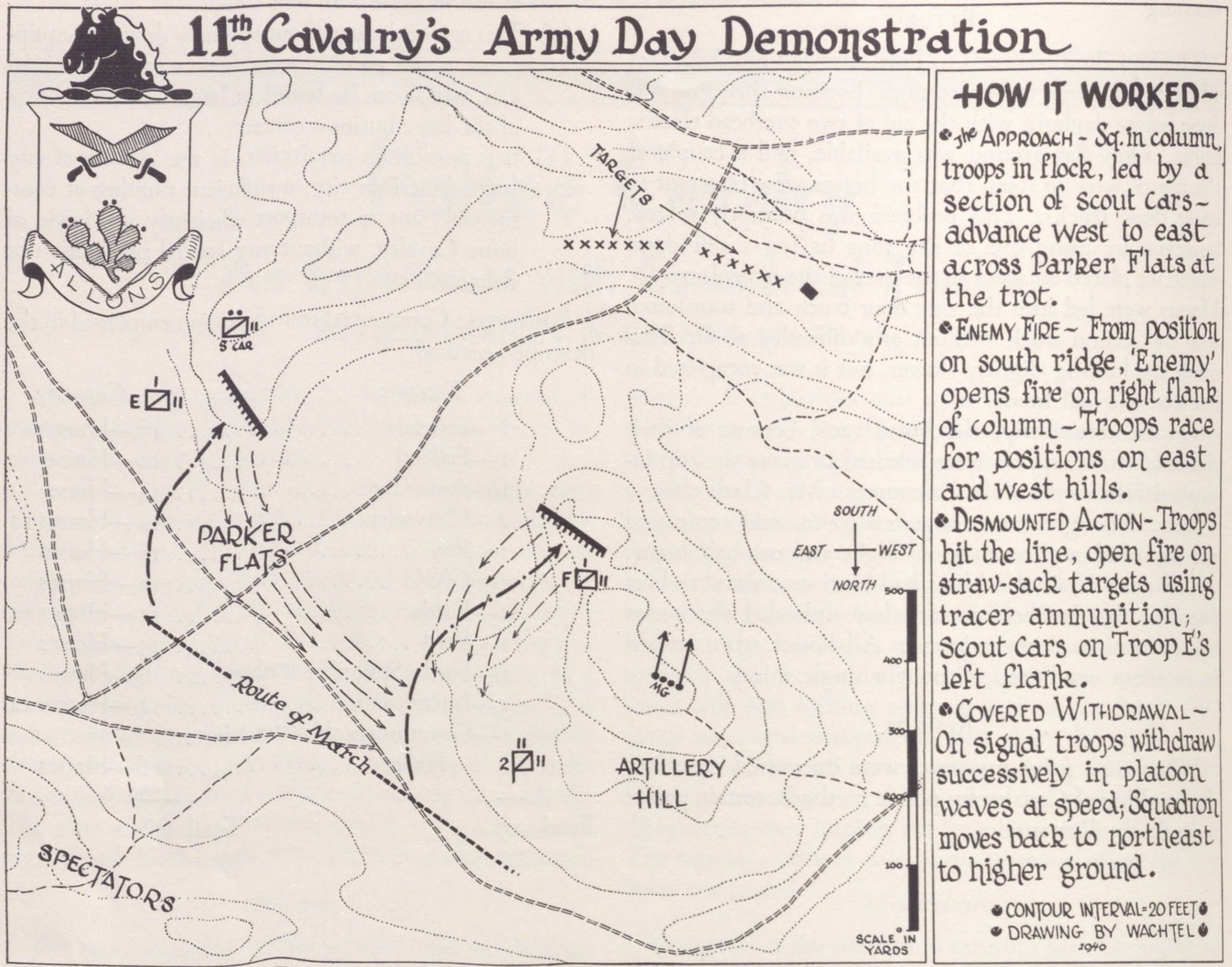
FOOTNOTE: Commercial transportation employed in the described method.

Tractors	*Capacity*
1—Federal	16—Horses
1—Federal	12—Horses
1—Auto Car	14—Horses
2—Chevrolets	12—Horses ea.
1—Reo	12—Horses
1—GMC	12—Horses
2—Fords	12—Horses ea.
1—Ford	13—Horses
1—Ford (Stall type trailer)	6—Horses
3—Internationals	13—Horses ea.
1—Government Indiana Horse Trailer	6—Horses
Total 15	Total 178



Eleventh Cavalry in the 3rd Division Army Day Show

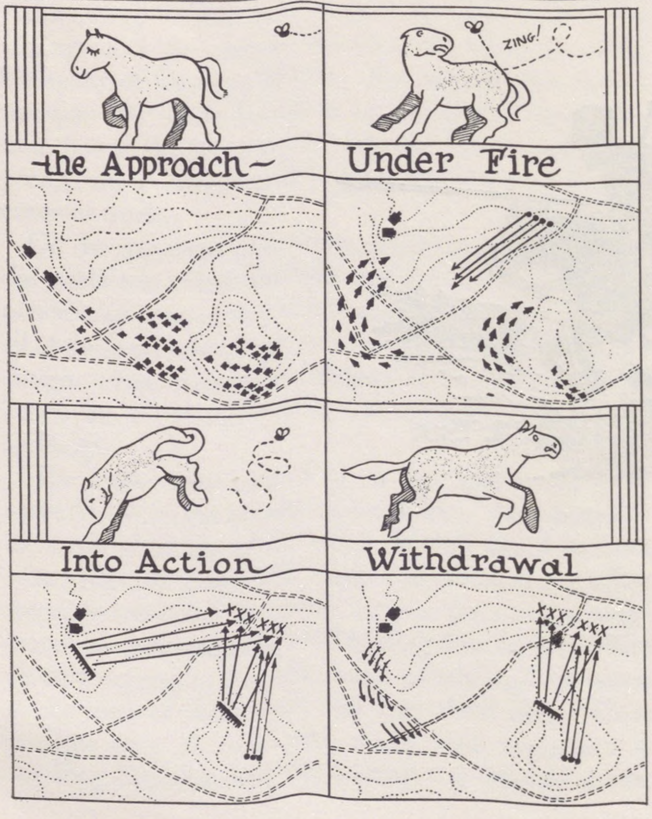
By STAFF SERGEANT JACK WACHTEL, 11th Cavalry


11th Cavalry's Army Day Demonstration
ALLONS
TARGETS
S CAR
E
PARKER FLATS
F
Route of March
2
ARTILLERY HILL
MG
SPECTATORS
SOUTH
EAST
WEST
NORTH
500
400
300
200
100
0
SCALE IN YARDS

HOW IT WORKED–

- **The Approach** – Sq. in column, troops in flock, led by a section of scout cars – advance west to east across Parker Flats at the trot.
- **Enemy Fire** – From position on south ridge, 'Enemy' opens fire on right flank of column – Troops race for positions on east and west hills.
- **Dismounted Action** – Troops hit the line, open fire on straw-sack targets using tracer ammunition; Scout Cars on Troop E's left flank.
- **Covered Withdrawal** – On signal troops withdraw successively in platoon waves at speed; Squadron moves back to northeast to higher ground.

CONTOUR INTERVAL=20 FEET
DRAWING BY WACHTEL 1940


the Approach
Under Fire
ZING!
Into Action
Withdrawal

Fire Power and Battlefield Mobility, twin Cavalry trumps in the game of combat, were demonstrated again on 6th April when the 11th Cavalry, under Colonel Homer M. Groninger, staged a 15-minute show before 40,000 enthusiastic spectators at the 3d Division's Army Day show at Camp Ord.

Appearing on a program which included demonstrations of Infantry and Artillery weapons, mechanization and other latest wrinkles in streamlined military action, the Monterey horsemen presented an exhibition of strictly down-to-earth warfare featuring the approach march, dismounted action and covered withdrawal. It was the oldtime team of man and horse and rifle.

Colonel Groninger and his staff were faced with a considerable problem in deciding upon a suitable subject for demonstration. Terrain was limited both as to angle of fire (all units used tracer ammunition) and as to the field of vision of the audience. A preview showed that the 3d Division was demonstrating actions certain to be crowd-pleasers—towed target firing by modern Infantry weapons with the air full of tracer phosphorus and the climactic roar of an airplane . . . speedy tanks showering themselves with dirt and glory as they blasted their way through and over barriers . . . majestic smoke screens—by and large, it would be a difficult assignment.

Colonel Groninger's solution: "We'll show the real thing. We'll use the terrain just as we would in an actual problem. Speed and fire power . . . and we'll give 'em targets that will burn when they're hit!"

The accompanying chart shows the ground and how it was used in the various phases of the show. Troops employed were from the 2d Squadron, 11th Cavalry. The entire regiment coöperated on arrangements.

Rather delicate timing was required, the Cavalry being allowed 15 minutes for its demonstration. Targets, composed of sacks of straw-soaked gasoline, could not be placed in advance since they were to be put in an area to be well shot over by two Artillery batteries, not to mention a battalion of Garands and HMG's, prior to the Cavalry show. They would be sure to be ignited prematurely; moreover, the gasoline would evaporate too quickly to permit leaving them exposed more than half an hour. A dry run showed that we had some three minutes from the time a horse battery fired its last shell until our first elements had to be on the scene. This period covered the time required for the battery to limber up and march "offstage." Two trucks from the Headquarters Troop, on signal from a liaison officer, moved into the target area after that last shell, started laying out the line of straw-filled sacks. Rocks were inserted to stop the tracers and gasoline was poured on to insure ignition. At the same time a Scout Car quietly mined a WPA Chick Sale which was to be blown up by fire—an action calculated to surprise the military as well as the civilian spectators. The car then stood by to fire blanks at the oncoming Squadron. It worked beautifully with but a single trial run.

Civilians saw:

Armored cars scouting the way, then a point of horsemen emerging like magic from the wooded slopes of Artillery Hill. Moving at the trot, troopers blanketed Parker Flats as the leading elements of the Squadron moved to the east on the approach march—advance guard for a mythical division. Suddenly a machine gun on the far hill opened fire. The leading troop swept itself clear of the danger area at a gallop and went into position on the center hill. The second troop, moving in a smaller semicircle, and fast, took position on the southern slope of Artillery Hill and the attached Machine Gun Troop platoon made a strictly "Heigh-ho Silver" dash for the top of the hill. Bullets zipped into the "enemy" position and within two minutes the hillside was a blazing line of fire targets. A mounted man dashed across the exposed plain; in an instant the first troop (Troop E) was withdrawing in speeding waves. Troopers bent low in their saddles, guidons streamed in the wind. It was effective and it was showy. The second troop galloped to cover on Very pistol signal, followed by the gunners, and as the finale the Scout Cars recrossed Parker Flats at speed with guns roaring.

Military highlights:

Controlled speed. Troop E, leading made a sweep at a hard gallop without losing cohesion. Machine guns hit the ground and made the line fast and without a hitch. Troop F, on a somewhat shorter route but a more difficult approach through scrub oak, put its guns into action in record time. The return dash, more difficult since the end of the run was into the wooded slopes on the northeastern side of Artillery Hill, showed superior control.

Fire power. All units, firing at ranges from three to five hundred yards, obtained gratifying hits. Distribution was excellent, the line of targets seeming to blossom almost simultaneously. Faster fire by Troop F effectively covered Troop E's return gallop, and the attached machine guns did yeoman's work to cover Troop F.

Reserve Training—What Scope?

By CAPTAIN CHARLES S. MARSH, 314th Cavalry-Reserve

Among the 100,000 or more Reserve Officers in the United States there are few, indeed, who are adequately trained for the grave responsibilities that may be thrust upon them by war. No one realizes this more fully than the conscientious Reserve Officer. There are thousands of officers in the O.R.C. who do not kid themselves about their qualifications or rather their lack of qualifications, to satisfactorily perform the duties of their rank. These same thousands derive little comfort from attending luncheons, conferences and social functions.

What they want and need is training with troops or in the absence of troops, then training in tactics involving small units on the terrain. Let me repeat, small units on the terrain. That is where battles are fought and either won or lost. Training the majority of Reserve Officers in problems involving units larger than a troop or occasionally a squadron is comparable to teaching a child to run before he can crawl. The map exercise when applied to small units is helpful to the student officer but supplant it with the tactical ride or walk or the terrain exercise and there you have something.

Last summer the writer attended the Fifth Corps Area School of Arms. This was primarily a two weeks' training period in the employment of infantry weapons and the conduct of small units in the field. The student officers spent two weeks in denims, on their bellies on the terrain, where they actually belonged, maneuvering small units in problems with ball ammunition. The conditions under which the training was conducted were as similar to war conditions as can be obtained in peace times. It was thorough, practical training. It was realistic and tangible; something the Reserve Officer could understand and see. It was physical. It made him sweat and it placed him where he will actually be if and when he is called upon to lead troops in battle.

The benefits of such a training period cannot be overemphasized and what is more the officers liked it and wanted more. It matters little if the officer's branch is Cavalry, Artillery or Infantry; that type of training is valuable. Once the basic principles of conducting small units is understood, the conduct of larger units can be more readily absorbed.

We Reserve Officers know that opportunities to train with troops are limited and that the use of ball ammunition in tactical problems is expensive. However, this Reserve Officer would venture the opinion, that all Reserve Officers during their early years as commissioned officers should be given at least one practical tour of duty of the type just described, preferably with troops. And such a tour of duty should be one of the requisites for promotion in grade.

Correspondence work is only one phase of training. Contact camps because they include all branches and all ranks are large and unwieldy. The time allotted of necessity, is so limited that many officers, especially those below field grade, derive little benefit from them. No matter how thoroughly prepared or efficiently managed, the contact camp can offer little more than demonstrations. All of these mediums of instruction are needed and cannot be dispensed with, but they are not sufficient. A maximum of four weeks' active duty in a 3-year period, correspondence work, contact camps, lectures and conferences will not make soldiers and good officers out of business men, no matter how capable, intelligent or conscientious they may be.

The O.R.C., however, regardless of the degree of training received, contains the best officer material the United States has excepting, of course, the Regular Army and some, not all, National Guard units. Upon them will fall a large portion of the responsibility for the conduct of troops in the event of war.

What then is the answer? One answer has been given: i.e., more emphasis on training with troops and in the actual conduct of small units in the field during the active duty training period; preferably with ball ammunition.

But there is another plan for training, perhaps worthy of consideration, and it applies to the long periods in between active duty tours. This plan requires initiative on the part of the Reserve Officers themselves but it provides a means for the self instruction of Reserve Officer units, supplementing those other mediums mentioned above that are provided for by Corps Area.

Such a program of self instruction has been working satisfactorily and with considerable success in the 1st Squadron, 314th Cavalry. This unit is composed of officers living in Cincinnati, Ohio, and vicinity, many of whom received their earlier training in the 3d Squadron, 107th Cavalry, U.S.N.G., also a Cincinnati unit.

Each month the Reserve Officers of the 1st Squadron, 314th Cavalry, conduct a terrain exercise; planned, prepared and executed by an officer of the squadron who acts as instructor. It is highly beneficial, especially to the one who prepares it. It is particularly valuable because it is held on the terrain and involves units not larger than a squadron.

Suitable terrain exists in all communities for such exercises and permission to make use of golf clubs and private suburban estates may be obtained if handled tactfully by a competent officer.

A recent exercise conducted by this squadron is submitted in detail. It illustrates a plan whereby a reserve unit acting on its own initiative, may secure simple, practical training on the ground to supplement the other methods of training available. It will be noted that methods other than the one submitted may be satisfactorily used in the same problem. However, the plan of submitting an approved solution at the conclusion of each phase, was very satisfactory. It controlled the unfolding of the various situations; eliminated discussion until the conclusion of the entire problem and speeded up the solution of the six requirements.

This particular exercise started at 8:00 on a Sunday morning at a suburban inn where breakfast was served to the officers of the squadron. At 8:30 the general situation was presented orally and important reference points, pointed out on a large key map drawn to scale in order to orient everyone present. A typewritten copy of instructions to officers, the general situation and an attached overlay was then distributed to each officer. Promptly at 9:00 AM the squadron left in cars for the scene of the first phase. Here a typewritten copy of the special situation and the first requirement was issued. Each officer was asked to write his solution in his notebook. After sufficient time had elapsed the next situation and the instructor's solution to the first requirement was issued in typewritten form. An overlay was attached. The instructor's solution was accepted as the approved one until the conclusion of the six phases of the problem. During the critique which followed, the solutions of the other officers were presented and any differences from those of the instructor's were discussed.

No doubt this form of instruction is going on elsewhere but emphasizing again, practical instruction on the terrain in the conduct of small units should remind all Reserve Officers that they *must* assume part of the responsibility of their own training if they desire to improve themselves.

The writer desires also to suggest to other Reserve units that much benefit can be secured by coöperating with local National Guard organizations, if there are such in their community.

In Cincinnati the officers of the 3d Squadron, 107th Cavalry, U.S.N.G., have been extremely coöperative and helpful to the Cavalry Reserve officers. They have taken part in the training program of the 314th Cavalry and have permitted the latter to participate in theirs. In addition, they have been helpful in the planning of Reserve training and have permitted the use of their armory for conferences and meetings. This type of coöperation can only result in better preparation of all the armed forces of the United States.

The Reserve Officer On Active Duty

By CAPTAIN E. BIBB, Cavalry-Reserve

(EDITOR'S NOTE: During recent months many comments have been heard pertaining to affairs of our Organized Reserves, particularly on the subject of quantitative and qualitative membership and training. An article in the April-May issue of the CAVALRY JOURNAL by Major Shea, F.A., elicited a variety of reactions as exemplified by remarks reaching the editorial office. Captain Marsh, in his comments just preceding, has touched on this subject. In the same vein these remarks by Captain Bibb are presented herewith as an example of one system of training in this field that appears to be successful.)

In the latter part of October this past year all Reserve Officers assigned to the 11th Cavalry Regular Army stationed at the Presidio of Monterey, received a training memo, a copy of which follows:

"HEADQUARTERS
"Presidio of Monterey, California
"October 16, 1939.

"Memorandum: Active Duty Training of Reserve Officers.
"To: Organization Commanders, 11th Cavalry, and Reserve Officers.

"1. Reserve Officers, when ordered to active duty with the 11th Cavalry, will be given instructions as follows:

"*a*. Practical instruction in horseshoeing, saddlery, supply and mess management; fire all weapons; prepare a full pack saddle (McClellan); receive instruction in the Phillips Pack, and terrain sketching.

"*b*. Each Reserve Officer will bivouac overnight with an officer's patrol, and be Officer of the Guard for at least one tour while on active duty.

"*c*. Be afforded an opportunity to exercise command of a unit appropriate to his grade.

"*d*. Be given maximum horsemanship instruction."

This represented a consolidation of the many verbal suggestions made by Reserve Officers on previous active duty tours. In addition each officer was later required to answer by indorsement, a request for more detailed report of his military, educational, and civilian record. This information was recorded in chart form in order that a more intelligent analysis could be made of each officer's needs in the way of training and his active duty guided accordingly. After his tour and just prior to his release, each officer is required to submit a report covering his reaction to the training he has just received and any suggestions or recommendations he can make. In this case the tendency is towards individual or a very small group training.

This plan shows that considerable study has been given to the subject, with a realization on the part of Regular Officers of the importance Reserve Officers will be called upon to play on M-day, and incidentally their importance as taxpayers and voters, hence their indirect but consolidated influence on army appropriations. It will eliminate the two weeks "vacation" of the past and in lieu of the "playing soldiers" will substitute a practical, intelligent course of instruction and of primary importance its application! Therein lies the crux of the problem. In this regiment the plans and training officer sees to it that the training schedule is carried out.

In addition to the training phases listed above the officer is assigned certain duties determined from his training record, to supplement previous training or cover phases which have previously been neglected, the objective being to round out his training and develop as efficient and competent officer as possible.

In the undersigned's case, he reported in for duty by signing officers' register, reporting to the adjutant and a few minutes later to the commanding officer. Within a matter of shortly over an hour he had secured quarters and messing facilities at the Officers' Club, appeared at the station hospital for physical examination, changed in uniform, been assigned an orderly, mounts from the training stables, and was back at headquarters ready for work. The adjutant handed him a regimental order which designated his duties as that of Asst. S-3 (NOTE: This regimental order was dated 3 days prior to date of reporting which is definite proof of advance planning), and approximately 10 minutes later was at a desk in the S-3 office, had been introduced to the enlisted personnel of the staff, and was receiving detailed instructions as to the work the Plans & Training Officer wanted accomplished. That evening necessary formal calls were made and thereafter the two weeks were spent carrying out his duties as Asst. S-3 and completing the phases of training outlined in memo.

The duties of Asst. S-3 centered for the most part around advance plans for the joint Army-Navy Maneuvers to be held next month in this vicinity. This work included such details as reconnoitering with scout car and crew areas from 100-150 miles away which would be suitable for maneuvering, possibility of leasing the area, and submitting reports on same. Other duties included study and report of the experiment of commercial truck portage, assisting in the management of the post horse show, etc. Being allowed considerable initiative in working out necessary arrangements, this officer was able to dovetail in the required practical instruction and almost every day get in several hours mounted cross-country work.

Having the advantage of over 4 years' active duty a considerable portion being with C.C.C. and also being a graduate of the Cavalry School, Ft. Riley, Kansas, the practical instruction served as a refresher course. However, for officers who have not had actual experience in certain phases, it is recommended that Par. 1 *a* in Memo.

be amended to read: "Practical instruction *and practice*. . . ." For until an officer has actually shod a horse he has a very poor conception of how to do it in spite of the best instruction; the same applies to actually sticking leather in saddlery, etc. And it is a proven fact that no officer truly learns property accountability or mess management until he has served and had practical experience in the capacity of supply officer or mess officer. It is just as true that it is far better that these things be learned by experience in peacetime where his errors will cause no harm, than to give him the theory and wait for M-day for its application.

In reference to Par. 1 *b*, it is felt that the Reserve Officer should have to serve as Officer of the Day as well as Officer of the Guard. If possible, the tour should be started with a formal guard mount. Regulations do not prohibit this service and in a number of posts is carried out.

In conclusion, this officer feels that this schedule and plan is one of the finest training programs he has come in contact with. The suggestions just given should add to its effectiveness. That objective, of being an efficient, competent, well-trained officer, is the one of a large portion of Reserve Officers. Of this larger percentage it is obvious that they favor the best training means that can be worked out; they want to become as close to being a "Regular" Officer as possible and still maintain their civilian life although a few would choose the army as a career. They prefer being judged on merit and accomplishment rather than having too much emphasis placed "on ability to get along with others."

Letters to the Editor

DEAR SIR:

I should like to discuss Major J. R. Randolph's article, "Mental Mobility," published in the January-February, 1940 edition. The Major's zone of action extends from Mendell to millionaires and from knighthood to negroes; but I believe that he has failed to establish a case. As I understand the article, Major Randolph recommends that to assign personnel to certain branches of the Service, a method should be devised to determine whether or not such personnel possess Mental Mobility: Mental Mobility he defines as a mental speed-up in times of excitement or danger, which enables the possessor to see events as though they were happening in slow-motion moving pictures. This, he states, is an inherited faculty and is something you either do or do not possess, and which you cannot acquire.

There can be no quarrel with the Major on this point. That a man is born with certain "talents" or "adaptations" which, while he may develop them, he cannot acquire, has been accepted for centuries and has been reaffirmed by modern authorities. However, I believe that the Major has not gone far enough, and that many of his statements will not stand up under examination.

It is true that a fighting man requires Mental Mobility, but to study and classify this intimate functioning of the human mind and soul, would pose a Thomas Acquinas. In stress, such as under shell fire, in a football game, or at the beginning of a rowing race, the normal man's experience is chiefly acute consciousness of a confused roar, and his body seems to function more by reflexes and habit than by considered action—this is one reason for the Army's training in discipline. As one grows more seasoned, one finds events sorting themselves out and one acquires a mental poise and has achieved that desirable quality of Mental Mobility.

Major Randolph appears to make this the goal; however, this in itself is little more than nothing for a man of action. The Major finds in modern literature, such as "Rhymes of a Red Cross Man," support for his theme; but many great writers have portrayed their characters as failing in crises by being unable to react physically while their minds were recording exterior events with clarity and precision. Yet Major Randolph accepts the slow physical reaction, or at lease requires no "talent" for physical reaction.

I believe a man of character can develop Mental Mobility, or if utterly devoid of such latent "talent," adapt something for it. But the difficult thing, and the important thing is to react physically. Goethe, who has been described as the last modern to grasp all human knowledge, says, "To think is easy, to act is difficult, but to act in accordance with one's thoughts is the most difficult thing in the world."

The records of the Battle of Adrianople give us no grounds to believe that the Visigoths possessed superior Mental Mobility or that they won the day by it. Victory and defeat cannot be explained quite so simply as possession or lack of Mental Mobility. Men crush the enemy or run away, charge into certain death or hide behind straws, for a great variety of reasons and because of limitless combinations of circumstances. One might suspect the Major of sounding a variation on the old theme of "Nordic superiority"; but it is common knowledge that the Roman Army at that time was a racial hodge-podge, which included Germanic and Oriental forces, while the Visigoth Army contained both Hun and Alani allies. A much more reasonable explanation of the Visigoth triumph would be on the basis of morale. We know that the Roman's leader, Valens, was a puppet set up by his mighty brother, Valentinian I, dead some 3 years when the battle of Adrianople was fought; that Valens was harried with wars in Persia and with internal conspiracies and with attempts on his life. So we can readily imagine the morale of his army, especially as they still had the walls of Adrianople behind which they could take refuge if they lost in the field.

On the other hand, the Visigoths were a desperate force, withdrawing to the south from the terror of the Huns and seeking food and "liebensraum." So, if we accept Napoleon's dictum that in war the moral is to the physical as 4 to 1, the Romans possessed no great superiority in force.

Now we come to some statements by Major Randolph with reference to the Clergy. He states to the effect that one of the reasons for priests not being permitted to marry was the possibility of their transmitting their lack of Mental Mobility to their progeny. How, then, does he explain the strikingly high percentage of clergymen's sons of great ability? Possibly better men, or at least better potential soldiers, are being attracted to the Clergy these days! But one of the reasons given for the Protestant Reformation was that the Church drew the best intellects into its service and impoverished other human activities because of it.

The Major also states that the monasteries and the priesthood were the retreat of scions of nobility who showed in war, in tournaments, or the hunt, that they did not possess Mental Mobility. This arouses one's curiosity as to his sources of information. He certainly has missed the warrior priests who protected their Christian flocks with their swords as well as ministering to their spiritual needs; he has missed the custom of great nobles who, when they felt they had completed their duty to their families and their subjects, would withdraw to the monastery to accomplish their duty to their souls. By the test of common sense, we cannot believe that nobility and peasantry alike would have given their respect and obedience to a group that was the retreat of the off-scouring of the nobility. The priests and the monks could hardly have been recruited from flunked-out boar hunters with deficient M.M. quotients when we consider how they took the Visigoths and other superior Mental Mobility types who were ravaging Europe, convinced them of the beauty of the civilization they had destroyed (and what good sport it was!), and led them on a thousand years of toil up to the Renaissance. It seems to me that the barbarian trek from the Asiatic Steppes to the Appian Way was a mere practice march when compared with the distance from the earthen floor of a hide-covered hut to the pinnacle of the Chartres Cathedral. And whom did our ancestors select for their officers in this latter campaign? The Christian priests and religious!

Joseph J. Wall,
Captain, 166th F.A.

* * *

Reserve Training

Dear Sir:

I read with great interest the article in the March-April issue by Major Shea, "Our Reserves: Prepared or Potential?" Major Shea has brought up an old sore spot with me—the Reserve Corps, and the Cavalry Reserve in particular.

I have been in the Cavalry Reserve for eight years, five out of these eight years I have held a commission. I have attended four active duty camps and have gone through the National Guard-Reserve Course at the Cavalry School. Major Shea is absolutely correct when he divides the Reserve Corps into devouts, and indifferents. Why then, does not the War Department choose to do something about these two classes? Why allow the devouts to lose interest because of not attaining anymore than those who are indifferent? Why lose track of young ambitious officers who after graduating from the Cavalry School, find that all the education they received cannot be put into practice unless they attend camps for two week periods? The last is really a farce. How can anyone, in two weeks, learn or be brushed up in cavalry tactics, for example? It seems that after undergoing three months of good training and education at the Cavalry School, it would seem fit that those officers who showed some ability would be assigned to some regular troops to put their training into practice. Instead, the officer is given a diploma and sent on his way to civil life to again readjust himself to civil life from military life.

About those who have not been fortunate enough to go through the Cavalry School. Their training is limited to conferences where they solve innumerable map problems, which the majority never understand. They are made to think in terms of maps, and when they do, if ever, get out on the ground they are lost. Assuming they master Tactics, they get practically no training in any weapons save, perhaps, the Cal. .30 rifle model 1903. This is only at the grace of some national guard or near army post commander. I was giving a lecture on some division of tactics, when several questions were put to me about the Cal. .50 Mg. the Cal. .30 light Mg., and even the Cal. .30 water cooled machine gun. Many in the class had never seen these weapons. This was no fault of the instructor's, he had no way of exhibiting these weapons.

As far as equitation goes, this is truly a lost cause in the reserve. Other than those who are fortunate to live near an Army Post having horses, the reserve must depend for his riding on riding academies whose horses are usually saddle gaited, or to use a phrase of a former unit instructor, "A leg in each corner, and a head and tail." Even with these horses, equitation is limited. Equipment is faulty, and correct riding positions are almost an impossibility.

Returning to Major Shea's thesis of two types of reserve officers, I have found cases where men who rarely attend inactive duty conferences are sent to camps as much as those who are weekly attenders. I have seen cases where men received promotions and when sent to camp could not even drill a platoon in close order mounted drill. Why then, is the question asked, are these men kept in the reserve? The answer to that seems to be that a quantity of reserve officers is desired in preference to a quality in the men.

Regular army officers should be stricter on their efficiency reports. Instead of allowing a reserve officer so much money for inactive duty pay, insist that this money be applied to purchasing adequate uniforms. Some representative uniforms date back to the World War. The government should be a bit more exacting in the requirements before allowing a reserve officer to attend camp and receive pay and allowances.

We find in the Cavalry Reserve examples of men who are veterans of the World War holding field grades. This well and good, but in many cases these men could not take the field particularly on a horse. They should be transferred to some unit where their physical inability to ride would not hamper them.

Let inactive duty training cover more practical subjects, and less theoretical ones. If all this is done, the Reserve Component will be a useful one when M-day arrives.

Yours very truly,
Harold W. Cohen,
1st Lt. Cavalry Reserve.

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EDITOR'S SADDLE

Swan Song—A One-Army Journal

This edition of The Cavalry Journal represents the final issue to appear under current editorialship. Under those circumstances, opportunity here is taken of expressing a note of appreciation. For those things which may have been worthy, there has been, always, a sign of indorsement; for things less worthy, there has been constantly a kindly forbearance and a spirit of sympathetic consideration.

After July 1st, Major Fenton S. Jacobs, Cavalry, will occupy the editorial chair. Many will recognize him as the author of "Cavalry Combat"; only one of the attainments which denote his qualifications for this new assignment. Of even more purpose, is a varied and balanced military career marked by considerable spaces of command duty; a background which lends a seasoned judgment to the selection and evaluation of material intended for presentation to cavalrymen.

Acquaintance with the coöperative support by all which will be his, the editorial pencil is transferred to him in the knowledge that the next few years will be both interesting and pleasant; furthermore, the thought of constructive service may add even more to any presentiments of satisfaction and pleasure.

In the vein of constructive service lies a swan song:

The purposes of a professional publication may be considered as many and varied. The progress and advancement of a branch or service is clearly a principal design; also, the interests of all individual members of a branch are considered in presenting data of a scope that may be expected to stimulate thought and reflection or keep them abreast of modern military affairs.

There appear below a few inadequate remarks on coordination and coöperation. An army of today is no longer an element of remotely isolated entities. For success, there must prevail a close coördination brought on by a sense of mutual dependence and mutual confidence. There is little that a single service journal may accomplish towards that goal. But a consolidated journal, representative of the whole army might accomplish much to that end. The artilleryman, cavalryman, infantryman, no longer can exist in a sphere of his own. The problems of one become the concern of the others. The problems and affairs of all ought to be presented between the covers of one publication. To cover that field a monthly journal would be required. With a potential field of over 100,000 officers a most representative journal could be supported; with a format and appearance comparable to *Fortune*. With that type periodical, there would appear a medium, not only of abiding interest to the entire army, but potentially a national instrumentality.

* * *

Co-ordination and Co-operation

On May 7, 1940, Mr. James Aldridge, representing the N.A.N.A., forwarded a dispatch from Stockholm, Sweden, on military events in Norway. The following extract is taken from his report:

"I have noticed that an essential part of their education (Royal Air Force officers) seems to be a grand contempt for the army. 'Traditional for the forces, you know,' someone explained. Maybe it is a good tradition, but if tradition caused the things I saw in Norway, then overboard with such traditions! . . . Anybody with half an eye on British affairs can see every now and then the evidence of this constant attitude of contempt and quarreling among the services."

It is to be emphasized here in these columns that the foregoing remarks are the reaction solely of a civilian war correspondent. It is not presumed to present them here for any other purpose than to draw conclusions as to the vital necessity of a deep-seated coördination in any military operation.

The question here is whether there exists in our forces that note of mutual confidence and respect among all arms and branches upon which alone effective coöperation can be developed; for without full and unhesitating coöperation there can be no coördination.

Are we building and progressing in an atmosphere where the members of each arm appreciate and evaluate the rôle and needs of all others? There is a rôle for each when war flames, and for the want of one through neglect or other reason, success may give way to defeat.

Have we reached a point where we can visualize the importance of each member of a combat team?

Do we foresee the events of a day when there is a token of appreciation in the presence of any one member of the combat team—where, by that presence, the stress of a desperate situation may swing to success?

Have we reached a mental plane where there is a sign of pride in the fact that other members of our own American team are on our own side—a sense of pride in ability and effectiveness, one for another—a sentiment of mutual confidence born of mutual respect?

Do we ponder on the theme of a strong national defense, or more, the welfare of a single component of the team? New features have entered war. Certainly, the requirements of all ought to be fully considered.

* * *

Reconnaissance and Security

There appear, on preceding pages, comments on the IV Corps Maneuvers conducted at Fort Benning during April. For the interest of cavalrymen, those maneuvers emphasized more than anything within a score of years the vital importance of reconnaissance and security. The personnel there present were impressed with the fact that only cavalry, in proper strength and composition, can render that service in an efficient and reliable manner.

* * *

Centralized Tactical Command

Will the day come when tactical command of the Army may be placed in the hands of a peacetime Commander-in-Chief with Headquarters detached from the more pertinent procurement and administrative features of the War Department? From a central outlying point, would field headquarters be established and critical attention be given to training and organization affairs? Might not the major problem of organization be chargeable to the Commander-in-Chief and transmitted to the War Department General Staff for the promulgation of data concerning supply, equipment, procurement, etc.?

The United States Cavalry Association

Organized November 9, 1885

The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—Article III of the Constitution.

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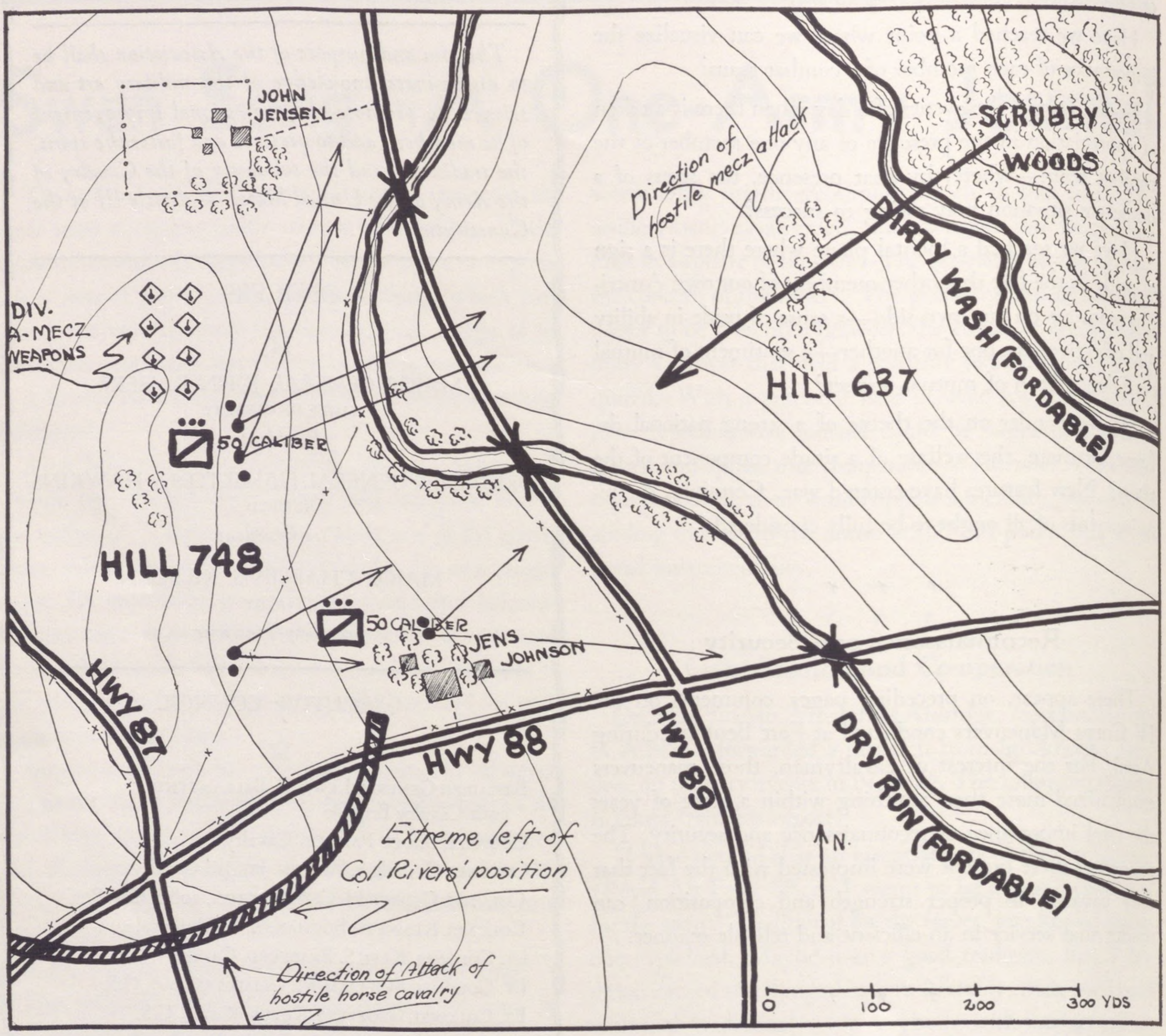
NOTES *from the* CHIEF *of* CAVALRY


JOHN JENSEN
DIV. A-MECZ WEAPONS
50 CALIBER
HILL 748
50 CALIBER
JENS JOHNSON
HWY 87
HWY 88
HWY 89
Extreme left of Col. Rivers' position
Direction of Attack of hostile horse cavalry
Direction of hostile mecz attack
SCRUBBY WOODS
DIRTY WASH (FORDABLE)
HILL 637
DRY RUN (FORDABLE)
N.
0
100
200
300 YDS

What Would You Do?

Major Jack Spavin added a spurt of seltzer to his glass in order to qualify the drink as a highball. "Your friend Andy Dancke isn't exactly in the doghouse, Yason," he said, "but the Colonel was pretty well wrought up over that mechanized attack back near Jens Johnson's. Didn't you birds up at brigade know about it?"

"Why, we thought it was quite a victory," replied Captain Lee Yason, the brigade liaison officer. "We knew the enemy had a fair sized mechanized outfit operating on the east flank, but that they couldn't get favorable ground for action until we withdrew north of Highway 88. So the idea was to delay the hostile horse outfits long enough for our own mechanized brigade to get on the scene. And that's the way it worked out. You saw how our mechanized counterattack in the direction: John Jensen—Hill 637 did the business."

"Sure. I know all that *now,*" said Spavin. "But *then,* as far as poor old Andy Dancke was concerned, it wasn't so easy. Colonel Rivers had just transferred him to the Special Weapons Troop because he'd had lots of machine gun experience, and his morale was ruined. He kept calling it his Phantom Troop—when action was imminent it just detached itself away before his eyes—and he'd yet to see an enemy tank.

"Well, on Tuesday, after we'd been withdrawing north on Highway 87 most of the day, Colonel Rivers got word from you birds to make a stand just west of Jens Johnson's and to protect the division left. The colonel hates to be bothered with details, you know, so when he gave his orders he just glared at Dancke and told him to protect the east flank and rear of the regiment.

"We had been getting reports," he went on, "from our scout cars off to the east, about a force of hostile combat cars, and we were hoping we could make Jens Johnson's before they got on our rear. Dancke saw the position (see sketch) and was overjoyed at a chance to operate his caliber .50 platoons practically under troop control, you might say.

"He got rid of his mortars to the squadrons as usual but put in the 50's personally. After about a half hour the hostile horse outfits made contact and attacked dismounted south of Highway 88. There was the usual racket going on except that no targets had showed up for Dancke's 50's.

"Colonel Rivers and I were up on Hill 748 and we noticed some 37-mm's from division getting into position to our north. All of a sudden Jeeman, our S-2, ran up pointing over to Scrubby Woods; and there was a whole slew of enemy combat cars knocking down trees and raising hell generally. Also the shelling was getting pretty heavy.

"We had a strong rumor that our mechanized brigade was coming up only a mile or so away, but we had nothing official and the Old Man had just about made up his mind to pull out. Just then a galloper from old Andy Dancke whooped up with his horse in a lather, and with a message something like this:

LARGE FORCE ENEMY COMBAT CARS WITH STRONG ARTILLERY SUPPORT CROSSING DIRTY WASH. HAVE KEPT THEM UNDER HEAVY FIRE, BUT BULK OF FORCE NOW REORGANIZING UNDER COVER OF HILL 637. UNLESS DIRECTED OTHERWISE I SHALL WITHDRAW WHEN LEADING WAVE OF HOSTILE CARS TOP HILL 637. WHAT SHALL I DO?

DANCKE."

Major Spavin drank deeply from his glass as his recital was making him a trifle hoarse. "Incidentally, Yason," he said:

"What Would You Do?"

(Solution below)

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Training of Cavalry Units, 1940-41

The following instructions and considerations pertinent to the training of cavalry units have been emphasized by the War Department for particular attention during the training year, 1940-41:

a. Oral and fragmentary orders should be the rule in cavalry units in order to speed up their action.

b. Cavalry should be trained in night marches and operations both on the roads and cross-country where conditions permit.

c. In preparation for emergencies in which radio communication fails, all cavalry units should be trained in operating without resorting to the use of radio as a means of communication.

d. In horse cavalry units certain exercises should be held without the presence of motorized and mechanized elements in order to accustom the units to perform the functions of reconnaissance, command, liaison, communications and supply by horse elements alone.

e. For the purpose of making a detailed reconnaissance of an area, vehicular reconnaissance should be supplemented whenever possible by the reconnaissance of horsemen or dismounted troopers.

f. Horse units with impedimenta should be practiced in swimming and crossing streams where facilities are available.

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Solution

Captain Andy Dancke's long experience with caliber .30 machine guns apparently served him ill in this case. Being used to drills in delaying action and deployed defenses in which his sections and platoons withdrew by echelon, he seems to have lost his head when faced with a mass attack by mechanization.

He should have realized that his weapons gain in effectiveness as the range is reduced; that his best work will be done at ranges under 300 yards. Given suitable emplacements with all around traverse his platoons should be quite effective. In any event his duty is to remain in place until the hostile attack has overrun the position, or has been driven off. Displacement is out of the question.

In this situation there appears to have been a regrettable lack of liaison, since the action of the regimental and division anti-mechanization weapons was not coördinated. Likewise Colonel Rivers should have been apprised of the counterattack by the friendly mechanized brigade. However, in highly mobile situations, all leaders must be prepared for communication failures and must use initiative in coördinating effort with adjacent units.

General Hawkins' Notes

So far, in this war in Europe, there have been no developments which should cause me to change any statements that have been made in these notes as to tactical training or the usefulness of cavalry.

The conditions that existed in Poland have already been commented upon in this column. The fighting that has taken place in the deep valleys and gorges of Norway has not been surprising. A more numerous and better equipped force, with a great preponderance of air force, has naturally been successful, particularly, because the very narrow and deep valleys in Norway lend themselves especially well to the bombing of columns of troops under such conditions; furthermore, the German motorized infantry, protected by high mountains on each side of the roads, has been able to advance more rapidly than the less well equipped and less numerous British troops.

This motorized infantry used their motors just as they would have used railroads had railroads been available along their routes of advance. In other words, the use of motors for transportation of troops is merely an extension of the railroad system. As long as they were protected from flank attacks by the mountains they were perfectly safe. The enemy had no air force to attack these motorized columns; thus, the terrain, the absence of enemy mounted troops, and the command of the air gave full opportunity for the employment of motors for safe transportation of infantry and artillery to strategic points in superior numbers.

This is interesting and instructive, but it should not lead our military officers to believe that this sort of thing can be done on different types of terrain against a well equipped, equally numerous and well led enemy, possessing a competent air force and cavalry.

Our maneuvers this spring, involving a number of our motorized divisions, indicated lack of this understanding. In the advance of such divisions, reconnaissance by air force, light motor vehicles, and cavalry is necessary in any ordinary terrain; furthermore, our umpires in maneuvers should appreciate that a few units of machine guns, skillfully placed and supported by antitank weapons and artillery, can hold up or destroy many times their own numbers of troops not properly deployed and not taking full and skillful advantage of cover. The practice too often seen in maneuvers of permitting the larger force to advance up to a few yards of their weaker opponent without these necessary measures and precautions, and then counting noses and awarding the decision to the larger force, is not only pernicious and harmful but also absurd.

Umpires need to be very well instructed officers. They should know the conditions under which troops can advance against a modern enemy, and they should insist that troops in attack should use the necessary measures or not be permitted to advance at all.

It also is ridiculous to send motorized troops, or indeed any troops, out on strategic marches without the proper supplies of ammunition, rations, gas and oil, and water. In war we cannot spot all of these supplies out in front along a given route as we do in peacetime. The lessons learned under such conditions are false and, therefore, worse than worthless.

The apathy in this country towards the obvious need for equipment of all kinds is astonishing. Modern war cannot be fought successfully with untrained troops or without armament and other essential equipment. No longer can an inspired militia, hastily organized, be depended upon. At least ten infantry divisions, at war strength, comprised of properly equipped and highly trained troops, ought to be ready at all times for any emergency. Similarly, five divisions of horse cavalry and one of mechanized cavalry ought to be kept and maintained in our southern states. These should constitute our regular mobile army. Our people appreciate, fortunately, the need for air force, antiaircraft units and garrisons at certain important points, but unfortunately even these are not yet completely equipped.

By-the-way, the experiments the Germans are using with parachute troops (the idea being borrowed from the Russians) suggests a further use for cavalry. Detachments of cavalry at various points behind the main forces should be able to move by the shortest lines across country to points where parachute troops are reported as dropping from the air and do these fellows in much as the roving detachments of men on skis did in Finland against the Russians. Each cavalry detachment should have a section of machine guns with it. Larger forces of cavalry should be kept ready to go to points where considerable numbers of enemy parachute troops have succeeded in landing. These dispersed groups of cavalry are comparatively immune from enemy air attacks. Thus, with every new development in warfare, further use can be found for cavalry.

One of the great deficiencies in our mobile divisions is the proper organization and equipment of mobile antitank units. Each division must have these units separately organized in addition to more limited numbers found in each regiment. We cannot learn much from maneuvers unless we have complete divisions to handle. Defective organization and inadequate equipment are sure to teach false lessons in maneuvers.

Any plan which contemplates the formation of an army corps consisting of one regular division and two or more National Guard divisions is wrong. The National Guard divisions cannot be raised in time. The mobile regular army, constituted as indicated above, must be ready to go into action instantly upon notice. The National Guard, can complete its organization and training for action at a later date provided that there is equipment ready for it as needed.

We must not, we can not, drift along as formerly with any plan which does not envisage immediate action. The times are changed.

To arms! should be the cry. Not to the extent of the great standing armies of Germany, Russia, and France, but a comparatively small though highly trained force must be raised. With an efficient navy, an efficient air force, efficient garrisons for important outlying points, and an efficient though small mobile army ready for instant action, the people of this country can feel safe. There is no other way. Are we not far from this goal at this date?

The amazing disclosures of the inadequate armament of the French and British armies during the great German drive are subjects for careful study by our military men at the present phase of the war, May 20th.

Surely, the French and the British must have known that German attacks would avoid the Maginot Line and come down through Belgium. It was known that the Germans had a number of mechanized divisions and a total of several thousand tanks, light and heavy. It must have been known that these tanks would be used as a spearhead to penetrate the Allies' lines in Belgium and western France. It must have been known that these tanks could be stopped only by numerous units of antitank guns. In these notes we have been advocating for a long time separate mobile units of antitank guns in each infantry and cavalry division and each army corps in addition to detachments of antitank guns in each regiment.

When it is known that the enemy has a certain number of tanks, we should have an antitank gun for every two tanks possessed by our opponents. These guns should be organized in battalions ready to move to any threatened point. Assuming that a battalion may have about 48 guns, and that the Germans had 2,000 tanks, the Allies should have had about 20 battalions of antitank guns.

Modern antitank guns can stop tanks. It is obvious that the Allies did not have them in sufficient numbers or with sufficiently large calibers. Why? They had plenty of warning from the Polish Campaign. They had plenty of time after the war in Poland to manufacture thousands of antitank guns if they wanted them. One can excuse the Allies for not having the air force that Germany has, because Germany has been preparing for this war for many years, whereas the Allies, unwisely perhaps, did not believe that war was inevitable. Through pacifism in England and France no steps were taken to curtail Germany's rearmament. Military men were not responsible for that, but after war became inevitable and frantic preparations began, there was no excuse for failing to provide the necessary guns to repulse mechanized attacks.

Furthermore, military men should never have permitted such pseudo military experts as Liddell Hart and others to influence the military principles under which they were arming, organizing, and training. Liddell Hart has written very plausibly that modern defense is so powerful that defensive tactics and not offensive tactics should be the rule. Like other advice from the same source, which has received too much consideration, this thesis, if followed, will prove disastrous. Armies must be trained for both defensive and offensive tactics; but, eventually, no victory can be won without offensive action. And not only the methods but also the spirit of offensive action must be taught to any army that expects to attain victory.

In order to take the offensive, every means known for such actions must be provided and used. This includes not only the attack by infantry supported by artillery, but also the attack by tanks and the attack by cavalry. As this war has proved, it includes the attack by air force. No means of attack can be neglected. The discarding of cavalry by England is likely to be a serious handicap to the British army in the attack. The same may be said of the French army. Germany, too, may find that despite their success so far, they need cavalry to make good the penetrations in an enemy's line accomplished by their mechanized forces.

In my notes published in the November-December, 1939, number of The CAVALRY JOURNAL I predicted that if the Germans broke through or outflanked the Maginot Line and caused the Allied army to retreat, the British and French armies would rue the day when they discarded cavalry, because cavalry supported by tanks is the only ground force that can check the rapid advance of the enemy without complete self-sacrifice and then be able to take its part in the offensive operations which often follow such a check. Without the help of cavalry the infantry, which is the chief fighting force, cannot withdraw speedily enough to be reconstituted and turn about to confront effectively the onrush of the pursuing enemy.

We do not refer to a cavalry arm with swords and lances, but a cavalry having numerous antitank guns, machine guns, together with rifles and pistols for close combat and such other weapons as may be found expedient.

When the offensive is resumed it is the cavalry which can continue the attack and pursuit of the enemy after the fuel and the crews of the tanks are exhausted.

If, on this date, May 20, 1940, or a few days later, the Allies attack to restore the situation they will need not only mechanized elements but also cavalry in great numbers. And since they have no cavalry they will surely feel its absence whether successful or not.

We read in German reports or claims that Allied tank units launched against German tank attacks, are soon badly smashed. Well, of course! Mechanized troops should not be used in this way. Enemy tank attacks must be stopped and broken up by antitank units. Then our tanks and everything else that we have may be thrown into the counterattack. To use our tanks against enemy tanks is simply to waste them. They are weapons of opportunity only, opportunity to attack unprepared infantry by surprise or by counterattack. If both sides are well supplied with antitank guns, properly organized, the tanks are of no use except to spring the counterattack surprises on enemy infantry that has advanced too far or beyond the support of protection of antitank units.

The Germans were able to use their mechanized units to break through the Allied lines because, to our amazement, the Allies were not properly prepared. This was the opportunity, and the Germans used it.

NOTES FROM THE CAVALRY BOARD

> *"The Cavalry Board invites any individual, whether or not a cavalryman, to submit for consideration constructive suggestions or ideas relating to new equipment, improvement of standard equipment, or to any problem or project under study by the Board. The Board will also welcome suggestions as to new problems that may properly be considered. Communications should be addressed to the President, Cavalry Board, Fort Riley, Kansas."*

First Aid Kits, Aeronautic.—This item was proposed to fulfill a need for a first aid kit for vehicular use. It consists of a canvas container measuring 7″ x 5″ x 3″ which can be carried on the dash or other surface by means of a "lift-the-dot" fastener. It is opened and closed by means of a zipper. The contents include aspirin tablets, boric acid and tannic acid ointments in tubes, first aid dressings, bandages, adhesive tape, a tourniquet and iodine swabs. The board recommended that liquid boric acid with an eyedropper be substituted for the boric acid ointment, that breakable items be protected by a non-breakable container, that a pair of small scissors be added and that certain minor changes be made in the pockets of the container. It is anticipated that a first aid kit similar to this will be issued during war time on the basis of one per reconnaissance car, combat car, maintenance truck, and kitchen truck.

Canteen Cover.—A small item of equipment, but indubitably a very important one! During the past the Cavalry Board has received a number of suggestions for modifying the canteen cover, the most recent one being from Corporal Robert Y. Sanders, Troop B, Second Cavalry. The ideas submitted have all been commendable and directed toward a very definite need for a canteen cover which can be carried on the person for dismounted use as well as on the horse. The Cavalry Board has undertaken a study of this requirement and in order to overcome certain objections to the suggested modifications has concluded that a canteen cover for horse cavalry use should embody the following characteristics:

a. Capable of being readily carried either mounted or dismounted.

(1) For mounted use, capable of being carried with field equipment or stripped saddle, and provided with a means of tying down to provide stability.

(2) For dismounted use, capable of being carried on the field belt; or, for fatigue details, etc., on the waist belt when field belt is not worn; to be unencumbered with straps or other devices necessary when attached to saddle; and provided with a means which will permit one man to carry a number canteens when detailed to fill canteens of a squad or more.

Accordingly, to embody the above characteristics, two canteen covers have been modified and are now being tested by the Second Cavalry. Detachable straps with snap hooks are provided to fasten to the cantle ring of the saddle, while on the back of the canteen cover are sewn web loops through which the saddle bag straps are laced for stability. Standard hooks for engaging in the field belt are provided. Below these hooks is a web loop to be used for supporting the canteen on an ordinary waist belt.

Perhaps, in the future, when the cavalryman has been thrown in to fill a gap in the line, he too will enjoy the luxury of a drop or two of water to cool a parched throat!

Modification of Horse Equipment.—The Cavalry Board desires to express its appreciation for the prompt and considerate response received from most of the regiments relative suggested changes in items of equipment. The Board hopes that there will be more suggestions and more data sent in on the subject as a result of the maneuvers this spring.

60-mm. Mortar and Pack Accessories.—A complete set of pack accessories for the 60-mm. mortar and ammunition has been manufactured by the Ordnance Department and sent to the Cavalry Board for final test. The purpose of the test is to determine if any changes should be made in the design of the hangers prior to standardization. In general both the mortar and ammunition pack appear to be satisfactory from the standpoint of weight, balance and stability. One pack horse carries the mortar, spare parts and tool roll and 18 rounds of ammunition. The ammunition pack horse carries thirty rounds of ammunition. Ammunition is carried in the fiber shipping containers, which simplifies supply and holds the weight to the minimum.

20-mm. Solothurn Antitank Gun.—The Cavalry Board recently conducted a short test of a 20-mm. Solothurn Antitank Gun, to determine the feasibility of packing and mounting in combat vehicles, as a possible replacement for the caliber .50 machine gun. This gun is mounted either on a light, portable wheeled mount or on a bipod and butt rest. When in firing position on the bipod and butt rest the gun weighs about 119 pounds without magazine or cartridges. It is a recoil operated, autoloading, single shot weapon. The board with the assistance of local ordnance personnel devised hangers for attaching the gun to the cavalry type Phillips pack saddle. By carrying the recess on one side and the barrel with two magazines of 10 rounds each on the other, it was found that the gun can be packed although the total weight is greater than the 200 pounds maximum, desirable in cavalry pack loads.

Tripod Mount, T-43.—The Cavalry Board has received one experimental tripod mount, T-43, for test. The object of the test is to determine if this tripod is suitable for mounting the machine gun M1917 and the machine gun M1919A4 "ground." This tripod which was developed by the infantry is constructed of an aluminum alloy and weighs about 25 pounds. The board is investigating the feasibility of packing this tripod as well as testing its stability as a firing platform.

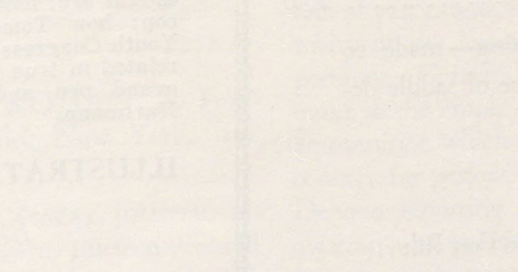
Watches.—The Cavalry Board examined seventeen different types and makes of wrist and pocket watches at the request of the Chief of Ordnance preparatory to revising changes in army specifications for service watches. These were all of the inexpensive variety. The board believes that, for those individuals for whom the present tables of basic allowances contemplates issuance of watches, the element of reliability is essential.

☆ ☆ ☆ ☆

The Origin of Polo

(Continued from page 253)

England on a visit and saw a polo game. He thought it was swell and brought back some mallets and balls and hired the place where the baseball big league games are played now. It is still called the Polo Grounds. He tried hard to get persons interested in Polo, but he did not have much luck for a good while. The first balls were pretty heavy and the mallets were not so hot either. In my aunt's house there is a picture of persons playing Polo and they all have whiskers. It is a very interesting game, and after a while more persons got to playing it, and they got better balls and mallets, and the game pepped up some, and now there are eighty-nine clubs beside the army.



Leather Equipment

The book department, The Cavalry School, Fort Riley, Kansas, is now accepting orders for leather and riding equipment. The following list indicates the nature of the supplies which are handled:

Bridles, Hunting, with lace reins and nose bands	$5.00
Bridles, Polo, with nose bands	5.75
Chin and Hat Straps	.40
Girths, leather	4.00
Girths, mohair, plain	4.50
Girths, mohair, leather reinforced	5.50
Halters, Show	3.50
Knee Pads, sheepskin	1.50
Lanyards, Pistol	1.00
Lanyards, Whistle	.75
Martingales, running	1.75
Martingales, standing	1.75
Polo Boots, per pair	2.75
Riding Stick (Covered with pigskin)	1.85
Riding Bats	1.15
Riding Crops, Nilgheri Cane	.85
Saddle Cloths, white	1.50
Crops, Rawhide Center, Braided or Plain	2.00
Saddle Pads, mohair (Yellow and white 28x 35)	8.50
Spur Straps, pig or calfskin	.75
Switches, Fly	2.25
Tie Ropes, Halter, white	.75
Stirrup Straps, leather	1.00
Interfering Boots, leather	2.00
Bell Boots, leather	2.50

Saddles—Jumping, Field, or Training—made to order. Prices vary according to type of saddle desired.

All Prices F.O.B., Fort Riley.

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What a book! It will make you laugh until you ache!

My Mother Is A Violent Woman is a three-ring circus with a Wadelton in each and every ring. Just wait till you read about the time Tommy and the Major kept house (but didn't wash any dishes); what Mother says about the Major's nightmares; how the Major dared to slap Mother; what happened when the stables caught fire; how Mother outsmarted the traffic cop; how Tommy in uniform panicked the Youth Congress—and scores of other incidents related in true Wadeltonian style; with many grand pen and ink sketches by Georg T. Hartmann.

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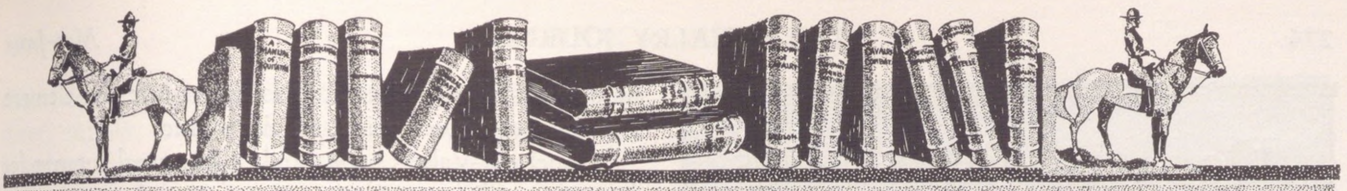

BOOK REVIEWS

DECISIVE BATTLES. By Major General J. F. C. Fuller, British Army. Charles Scribner's Sons, New York. 1,030 Pages. $4.50.

The original publication of this book appeared as a two-volume edition published in England. The current one-volume American edition contains all the material and mats which appeared in the original two volumes.

Once more the author of *Grant and Lee* has produced a work of paramount interest to the military student. From Alexander the Great to Franco the author traces with skill thirty-seven battles and campaigns that changed the course of history. In those brief or extended intervals of time between wars the author draws frequently a vivid and penetrating synopsis of those things which resulted from a previous conflict and of the things which led again to war. The reader is carried not only into an absorbing description of battles but also into the personalities of the leaders involved, their strength and weakness, and the reasons which led them and their armies into the campaign.

In selecting the decisive battles of the past twenty-three centuries, the author has been guided by their influence upon history and civilization. It may surprise the average military student to see that General Fuller has selected the Battle of Chattanooga as the decisive one of the American Civil War. Why it came within the purvue of that expression may be gleaned from this sentence, "Should Chattanooga-Atlanta be lost, then to all intents and purposes, from a supply point of view, and be it remembered supply is the foundation of strategy, the Confederacy would be reduced to the Carolinas and Virginia." Decisive, also, because with a Union victory subsequent in the North American continent has proved far different than might otherwise have resulted had the Confederacy been able to continue to draw upon the vast resources of the deeper south and southwest.

General Fuller's book is regarded as a highly significant military publication.

* * *

MY MOTHER IS A VIOLENT WOMAN. By Tommy Wadelton. Coward-McCann, New York. 121 Pages. $1.25.

One day two years ago The Cavalry Journal received a manuscript from unknown, thirteen-year-old Tommy Wadelton, Jr., who said in an accompanying letter to the editor, "I tried to sell this but no one wanted to buy it, but they wrote me nice letters about it, so I am going to give it to you if you don't want to buy it, because it is about the army some." The editorial office of The Journal found the story so natural and so funny that it bought the story and passed it on to Cavalry Journal readers.

Now Tommy comes forth with a book in which he passes judgment on his family, the army, and the world as seen through his own personality and colored by his own humorous outlook.

Tommy reaches new heights of fun in the last chapter of his book in which he relates his experiences at the Youths Congress at Vassar College last summer. His impression of "lady Youths" and "gentlemen Youths" led Tommy to the conclusion that he was "pretty lucky to be an American and have President Roosevelt for a boss instead of Dictators and Gay Pay O's and things like that."

Tommy Wadelton's book is not serious reading. It is highly recommended for a delightful evening's entertainment and is guaranteed to furnish more than one hearty laugh.

* * *

ROMAN EAGLES OVER ETHIOPIA. By Colonel P. A. del Valle, U. S. Marine Corps. Military Service Publishing Co., Harrisburg. 200 Pages; 25 Explanatory Maps; Profusely Illustrated. $2.50.

For the first time the American reader has been presented with a clear and detailed account of Italy's operations in Ethiopia by an eye-witness able to analyze and evaluate the military factors involved.

In very readable fashion the author presents a discussion of the events leading up to the expedition, reasons why Italy felt compelled to enter the domain of east Africa, the various handicaps of terrain and climate, the peculiar traits and defense of the natives, supply problems, mechanized facilities, and the broader phases of the Debono period, together with the final measures of Badoglio.

American interest in this book is paramount primarily because it was a campaign of maneuver. Fought in a terrain of vast extent, with limited means of communication, many of the lessons emphasized have a particular importance. Graziani solved many of these difficulties by resort to the employment of a rolling reserve of food and ammunition which permitted a column to break off cross-country for periods of as long as twenty days. One finds Debono reporting that in the first day's advance the aviation was practically the only means of securing information of troop movements—telegraph, telephone, radio, even with corps commanders, proved exceedingly difficult. The general account of the entire campaign is in such detail as to paint an adequate picture of the coördinated effort of all echelons—infantry, motorized columns, air power—all so coördinated as to produce the element of surprise at a given point at a given time.

Colonel del Valle's book holds an unusual interest for American military students.

* * *

S-2 IN ACTION. By Lieutenant Colonel Shipley Thomas, M.I. Reserve (formerly, Captain, 26th Infantry, 1st Division, A.E.F.). Military Service Publishing Company, Harrisburg. 128 Pages; $1.50.

Preceded by a foreword from General Summerall and a preface by Colonel Hjalmar Erickson, Retired, the author breaks at once into the importance and character of the S-2 job in a regiment. Succinctly, Colonel Thomas has produced a book devoted strictly to the combat intelligence officer who is charged with the duties of regimental S-2. It evidently has little application to intelligence affairs in the routine of normal garrison life; however, in maneuvers, where the S-2 is given any personnel and is expected to function in a constructive manner, this book is of great value.

This book should bring home to many now responsible for training the fact that intelligence training is generally disregarded in a most deplorable manner. There is little excuse for a Table of Organization to denote earmarked individuals who supposedly will be capable of rendering the paramount duties in this field, but who in actual practice are delegated to lesser and non-prolific activities. No personnel will be more useful in actual war than trained intelligence agents. For those individuals responsible for the training of a regiment this book is recommended in order that they may see that the officer detailed for duty as S-2 is provided with a copy of it.

* * *

ROOTS OF STRATEGY. By Major Thomas R. Phillips, C.A.C. Military Service Publishing Company, Harrisburg. 440 Pages; $3.00.

Roots of Strategy is really a collection of military classics edited by Major Phillips. Included are discussions of the conduct of war by outstanding leaders of the military art. Except for brief comments by the editor, the book is really made up of the following:

The Art of War, by Sun Tzy, 500 B.C.

The Military Institutions of the Romans, by Vegetius, 390 A.D.

My Reveries on the Art of War, by Marshal Maurice de Saxe, 1732.

The Instruction of Frederick the Great for His Generals, 1747.

The Military Maxims of Napoleon.

Perhaps, *Roots of Strategy* is one of the few sources in which may be found verbatim the *Maxims of Napoleon,* and for this reason alone constitutes an investment by a military scholar. (Previously published volumes of these maxims are now out of print and practically impossible to obtain.)

In going through this volume, one is astonished on the nature and extent of the subjects given consideration by

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these historic chieftains. Details on uniform, field equipment, supply, mobile forces, supporting elements—all have been considered down through the ages.

It is believed that as a source book alone, Major Phillips has presented to the military student a most valuable contribution.

* * *

BORDER CAPTIVES. By Carl Koke Rister. University of Oklahoma Press. 196 Pages; $2.00.

Carl Koke Rister is well equipped to write on the subject of border captives, being the author of several previous works on Indian warfare, such as *The Southern Plainsmen, The Southwestern Frontier, 1865-'81* and *The Greater Southwest.*

This book deals principally with the period 1835-1875 in that part of the West now embracing parts of Kansas, Colorado, New Mexico, Oklahoma, and Texas; an area where five of the most war-like North American tribes resisted the advance of the white man—Kiowas, Comanches, Cheyennes, Arapahoes, and Apaches. The major part of the volume is concerned with the traffic in prisoners involving these tribes during the foregoing period. Hundreds of white women and children were taken captive by Indians, many of whom were ransomed in the course of time by friends, relatives, or the Federal government for sums ranging from $200 to $2,000. Trading in white captives by Indians became, in fact, one of the most important sources of income for the wild bands.

Although there is an unsavory romance connected with many of the individual cases of white captives, the predominant note is one of savage brutality on the part of the plains Indian. Although interesting from the point of view of actual history in the conquest of the West, one cannot refrain from advocacy of the doctrine, "The only good Indian is a dead Indian." It is to be hoped that the rugged character exemplified by the pioneers of that age has descended in some degree on the collective shoulders of this generation of Americans.

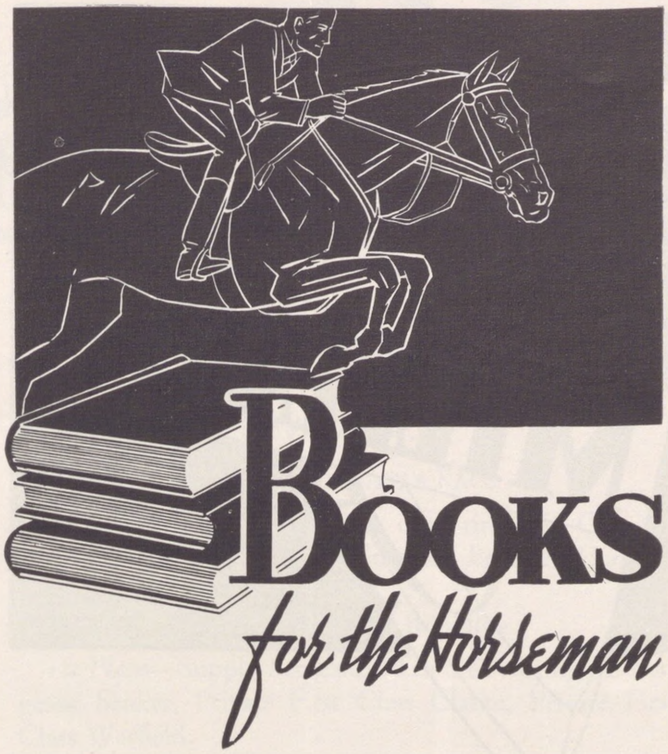
* * *

TECHNIQUE OF MODERN ARMS. By Colonel Hollis LeR. Muller, C.A.C. Military Service Publishing Company, Harrisburg. Illustrated; 401 Pages; $2.50.

Extracts from the Preface and Table of Contents best present the purpose and scope of this volume:

"The purpose of this text is threefold. First, it attempts to outline a simple and concise plan of study for beginners in the military art; next, to provide a source book for instructors in basic schools and those responsible for the grounding of citizen officers in the fundamentals; and, finally, to assist both the junior officer who is preparing for service or extension schools and the senior officer whose purpose it is to refresh his mind on bare essentials of the science of war.

"Every officer soon finds that 'knowing his profession' consists mainly of handling men and employing the instruments of warfare. But, before we may hope to combine men and weapons in tactical teams, we must con-



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Selection and Training of the Polo Pony, *Cullum* ..	5.00
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Training Hunters, Jumpers and Hacks, by *Colonel H. D. Chamberlin* (Original printing—limited edition, 17 copies left)	10.00

(Books on horsemanship by The Cavalry School are listed with the Departmental Texts on inside of back cover.)

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centrate on the human factors. In short, the first step is to master the human techniques which in the service we call 'leadership.' "

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Unquestionably, Colonel Muller has given to the field of military literature a most useful volume, particularly for members of the two civilian components of the army and for the junior officer.

* * *

WORLD IN ARMS, A Study in Military Geography. By Major R. Ernest Dupuy, U.S.A. Military Service Publishing Company, Harrisburg. 103 Pages; $2.00.

The original edition of this book appeared in October, 1939. This new revised edition brings up to date features which have been changed by virtue of conquered territory and improvements in weapons including the airplane. The book is devoted primarily as was the first edition, to geographical corridors which mark routes of invasion into various countries and areas. Military and naval strengths of each country are shown as well as locations of main airdromes and naval bases. Included again are symbols showing air mileage and time travel between air bases and potential hostile targets. Strength and organization of all countries are furnished to include army, naval and air forces.

* * *

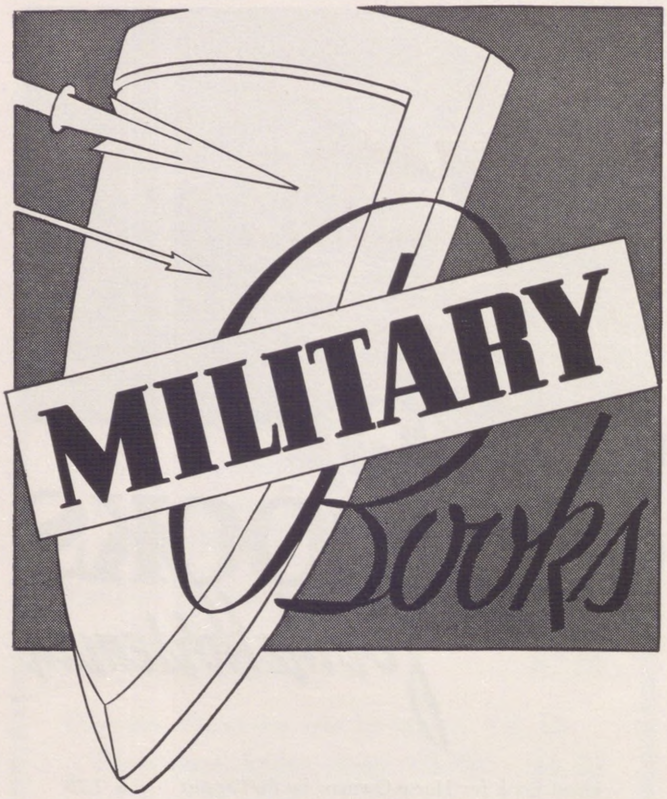
COCKPIT OF THE REVOLUTION. By Leonard Lundin. Princeton University Press. 453 Pages; $3.75.

In referring to *The Cockpit of the Revolution* the author refers to the American Revolution and emphasizes the events and incidents occurring in New Jersey as forming the cockpit which culminated in war.

Professor Lundin draws a graphic picture of affairs and conditions in the colony of New Jersey prior to the outbreak of war. In considerable detail he isolates the population of the colony into hostile camps as Tories or Whigs. His pen sketch of the important campaigns which culminated in Princeton and Monmouth are most satisfactory and drawn in a sweeping and readable fashion.

Once more is emphasized the fact that the decisive feature of a campaign may not be found necessarily in the best known engagement, but may have materialized through a minor affair in a less publicized field. It is in this realm that Professor Lundin attaches considerable importance to events in New Jersey which eventually concluded the successful termination of the Revolutionary War in favor of the colonies.

For the student interested in those features of our national history of that era, particularly of affairs heretofore given small attention, *The Cockpit of the Revolution* is heartily recommended.



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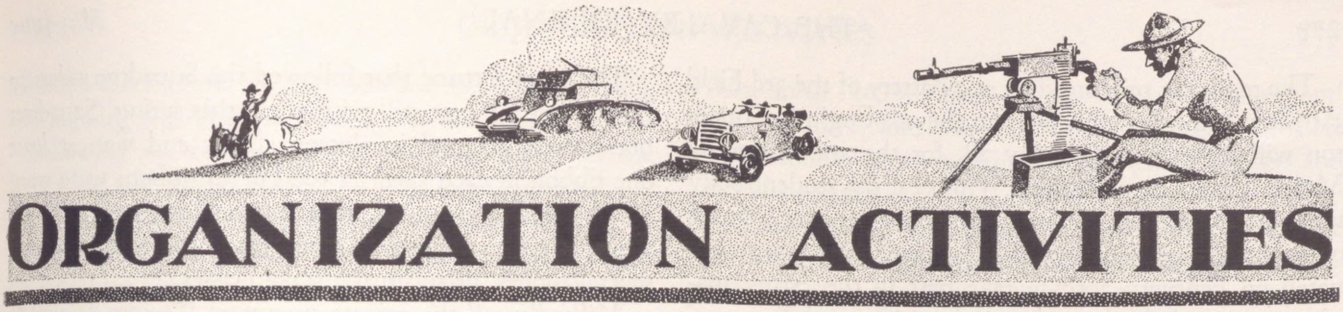


ORGANIZATION ACTIVITIES

1st Cavalry—Fort Knox, Kentucky

Colonel Henry Baird, *Commanding*

For the past two months training activities have pointed toward the Army Maneuvers. All technical schools for enlisted men have been completed, returning to the regiment a welcome quota of qualified radio operators and mechanics.

Early in March, the regiment participated in a mounted review for the 6th Infantry. Subsequent tactical exercises with the infantry reënforcement have proved of great value to all and have strongly indicated the desirability of normal infantry reënforcement.

The inspector general arrived on March 20th and gave us a thorough going over. The regiment made its usual creditable impression.

In the near future a large turn-over in commissioned personnel is in prospect. Orders have been received which send Captain Willson to Fort Ringgold and Captain Blanchard to Fort Brown. Captain Barriger, Captain Mansfield, and Lieutenant Bethune are under orders for school, as is Captain Bryan who goes to Leavenworth. Replacements have not yet been assigned to the regiment.

Athletics have received a great deal of attention under Captain Engerud who has taken an active interest in promoting a great many "slack season" sports. Table Tennis and Volley Ball have proven popular. Troop "A" walked off with the Regimental Volley Ball Championship.

On April 6th Captain Greiner's Machine Gun Troop marched on Cincinnati where the organization participated in the celebration of Army Day.

The Governor of Kentucky visited us on April 27th when, at a review held in his honor, he witnessed the largest assembly of motor and mechanized equipment brought together at Fort Knox.

May 1st finds the regiment completely equipped with vehicles for the first time in its history as a mechanized unit. Like the Derby prospects in nearby Churchill Downs, the First Cavalry is in top condition and "ready to roll" for both the Reds and Blues in Louisiana and Texas.

* * *

2d Cavalry—Fort Riley, Kansas

Colonel H. D. Chamberlin, *Commanding*

During the past two months the Second Cavalry has been engaged in dismounted and mounted pistol firing, and in the usual spring training and Academic Division activities.

On March 15th Machine Gun Troop held a Troop Horse Show with the following results:

Class I—Equitation Race

1st Place—Sergeant Augustine.

Class II—Shuttle Race

1st Place—Corporals Team consisting of: Corporal Golden, Corporal Sanders, Corporal Beasley, Corporal Koch.

Class III—Team Jumping

1st Place—Supply Sergeant's Team consisting of: Sergeant Senker, Private First Class Clarke, Private First Class Warfield.

Class IV—Corporals and Privates Jumping

1st Place—Corporal Pratt.

Class V—Handicap Jumping

1st Place—Sergeant Caldwell.

Suitable prizes for 1st place and ribbons to 1st four places were awarded.

On March 27th a detachment of Scout Cars from the 2d Cavalry under the command of 2d Lieutenant, Allen D. Hulse, 2d Cavalry, left the post for Fort Benning, Georgia, to take part in the Umpire Radio Net Control for the maneuvers being conducted there.

The Regimental Commander, Colonel Harry D. Chamberlin, departed from the post on April 1st for Fort Benning, Georgia, to take part in the 3rd Army maneuvers. Major Alfred L. Baylis, 2d Cavalry assumed command of the regiment during the temporary absence of Colonel Chamberlin.

The 2d Squadron, 2d Cavalry with the Regimental Trumpeters in their colorful uniforms of the 2d Dragoons paraded in Junction City, Kansas, as part of the activities held there in connection with Army Day, April 6th. After the parade the Squadron was formed on the west side of the Municipal Park where a display of Cavalry Weapons was open to the public. This display was enthusiastically received by the visitors from surrounding communities.

The Inspector General arrived on the post April 25th. Troop "A" acted as escort.

In connection with the Department of Kansas Reserve Officers Association Convention in session at Junction City, on April 26th. Troop "A" presented their well known 2d Dragoon ride as part of the program at the West Riding Hall.

The regiment reinforced by one Battery of the 3rd Field Artillery and a detachment from the 9th Engineer Squadron will leave the post May 2d, for the annual Spring March of the Cavalry School. This year the student body will be comprised of National Guard and Reserve Officers only, as the regular class of the Cavalry School was terminated on February 29th to take part in the Army maneuvers being held this spring in Louisiana and Texas.

* * *

1st Squadron, 3d Cavalry—Ft. Ethan Allen, Vermont

Major E. F. Dukes, *Commanding*

Lieutenant Colonel S. V. Constant who has commanded the 1st Squadron, 3rd Cavalry since July 1, 1939 received orders assigning him to the 2nd Corps Area Staff at Governors' Island, New York on March 1st. He left Fort Ethan Allen on March 1st and after a short leave reported to Governors' Island for duty. With the departure of Lieutenant Colonel Constant, Major E. F. Dukes assumed command of the Squadron and of Fort Ethan Allen, as well.

Captain T. C. Wenzlaff has received his orders to report to the 1st Cavalry Brigade at Fort Clark, Texas, this summer.

Orders have been received in the Squadron assigning Lieutenant Colonel Richard B. Trimble to the Squadron. It is expected that he will arrive sometime near the end of July.

Second Lieutenants Leslie H. Cross and Ralph L. Foster have gone to Canton, New York for duty with the Rents and Claim division of the 1st Army. They will remain there until such time as all claims for the coming proposed summer maneuvers are settled and will then, it is hoped, return to the Squadron.

Major General James A. Woodruff, the 1st Corps Area Commander, flew to Fort Ethan Allen on April 19th and inspected all members of the garrison.

Major General John K. Herr, the Chief of Cavalry inspected the Squadron on Wednesday, April 17th. A luncheon was held in his honor at the Officers' Club at noon. Troop "A" formed the escort when the General left the Post.

A pistol team from Troop "A" composed of First Sergeant Stanley Blazejevski, Sergeant Roy Wood, Corporal Richard Hazel, Corporal George McAvoy and Private First Class Francis Gormley went to Manchester, New Hampshire to attend the New Hampshire State Pistol Matches. As yet no report has been received as to the final outcome of the matches.

The Squadron sent Captain J. K. Mitchell, Captain T. C. Wenzlaff, First Lieutenant Robert E. McCabe, Sergeant Roy R. Wood, and Corporal George C. Armonaviczie to represent it in the Ninth Annual Cavalry Horse Show sponsored by "The First Company Governor's Horse Guard" (110th Regiment Hartford Cavalry C.N.G.) held in West Hartford, Conn. The show was held on April 25, 26, and 27th.

The good fortune that followed the Squadron riders to Boston last fall was still with them this spring. Squadron horses were entered in sixteen classes and won at least one ribbon in each class. A total of 34 ribbons were won, 14 of which were blue, 10 red, 7 yellow, and 3 white. There were 14 trophies to match the 14 blue ribbons and several money prizes in the stake classes.

Milly Russell the private mount of Captain Wenzlaff won 13 ribbons, of which 7 were blue. *Tigh Time* a government mount won 8 ribbons of which 2 were blue. *Hailstone* owned by S. Victor Constant, Jr., won 8 ribbons of which 3 were blue and *Black Beauty* a government mount won 5 ribbons of which 2 were blue.

Word has just been received that the Rifle Team of Troop "A" won 4th place in the N.R.A. Military Company competition. 272 teams competed in this shoot. Troop "A's" team was composed of the following named men, First Sergeant Blazejevski, Sergeant Wood, Corporal Hazel, Corporal Beaulieu and Private First Class Gormley.

The pistol team composed of the same men won second place in the N.R.A. Pistol team competition. Six teams competed in this event.

The performance of the team in both rifle and pistol firing is considered especially good because the range was under repair during the greater part of the indoor firing season and so could not be used for practice.

The team also attended the Vermont State Match and won 1st place in the 50 foot Team Pistol Match.

The Squadron has completed its dismounted pistol and mounted pistol range practice despite the usual Vermont April blizzards. The troops are now engaged in rifle firing which will be completed by the end of the month.

* * *

5th Cavalry—Fort Clark, Texas

Colonel C. P. Stearns, *Commanding*

The range season, which began February 12th, was completed April 13th. Two hundred and forty-nine men fired the prescribed qualification course with the model 1903 rifle. Of the men firing, thirty-five qualified as experts, ninety-six qualified as sharpshooters and one hundred and seventeen qualified as marksmen. Two men disqualified which gave the regiment a qualification percentage of ninety-nine and two tenths per cent with an average of two hundred thirteen and seven tenths.

Eighty men were required to fire the heavy machine gun course. Sixteen men qualified as experts, fourteen as 1st Class Gunners and forty-eight qualified as 2nd Class Gunners. Two men disqualified on the course. The regimental percentage for qualification was ninety-seven and five tenths per cent, with an average score of one hundred seventy and seven tenths. Corporal Akins, Troop "E," was high man with the rifle with a score of two hundred and forty one. Corporal Ford, Machine Gun Troop, was high man with the heavy machine gun with a score of one hundred and ninety-three.

As in the past, Army Day celebration at Fort Clark proved to be another gala event. Under a cool clear sky, a mounted full pack review was held for the many civilians and military organizations who visited the post.

Following the review, exhibitions were given on the Drill Field and Target Range in the following order:

One troop in Mounted and Dismounted attack.

The Provisional Machine Gun Squadron, consisting of the Machine Gun Troop and two Machine Gun platoons of the 5th Cavalry, in hasty action. Blank ammunition was used in this demonstration. Captain Claybrook, attached to the regiment, commanded the Provisional Machine Gun Squadron.

After the Machine Gun demonstration, 2 Heavy Machine Gun, caliber .30, 2 Machine Guns caliber .50, 4 M1 rifles and 4 Springfield rifles were made available at the 300 yard firing point for civilians to fire at the rate of ten rounds per machine gun, except that no caliber .50 was fired, and five rounds per rifle for each man.

From 12:00 noon to 12:30 P.M., the civilians inspected the barracks accompanied by officer and non-commissioned officer escorts. During the inspection of the barracks, Troop Officers and non-commissioned officers gave the civilian groups a running account of the functioning of each activity within their troop. Dinner for the visitors at the troop messes followed the inspection of barracks.

After dinner officer guides conducted their groups on an inspection of display of arms and of administrative packs on the porch of their respective barracks. Officers and non-commissioned officers were there to explain any detail in reference to this display.

Scout cars of Headquarters and Headquarters and Weapons Troop, 1st Cavalry Brigade and 5th Cavalry with complete complement of men, arms and radio equipment were formed at 12:45 P.M., in closed column on Scales Avenue and held ready for general inspection.

At 2:00 P.M., Troop "A," with mounted Band, gave an exhibition of a formal mounted guard. In the evening a 30 round boxing card was held. This ended a rather full day of interesting activities.

The regiment recently reveived their quota of new M1 rifles. Prior to the departure of the regiment on Army and Corps Maneuvers, all men armed with the rifle were required to fire the M1. All our Springfield rifles were turned in to the Ordnance Officer on the 15th of April.

Major General Kenyon A. Joyce arrived at Fort Clark for the annual tactical inspection the afternoon of April 8th. In the evening a reception in the general's honor was given by the officers of the command.

On the 9th of April the general inspected the garrison at a review on the Drill Field in the vicinity of the air hangar followed by and inspection of Troop "A" barracks, the new stables recently completed and those under construction.

Preparations for participation of the regiment in the Army and Corps maneuvers having been completed, the regiment, in accordance with order, with the Headquarters and Headquarters and Special Weapons Troop 1st Cavalry Brigade, Medical and Veterinary detachments attached, began its movement to Jasper, Texas in three serials. Serial No. 1, Motor Convoy, under the command of Lieutenant Colonel Roy E. Blount, departed from Fort Clark Monday morning April 22nd with 12 Officers and 324 enlisted men.

Garrison rations were issued to the column to include the noon meal of April 24th. Field rations began with supper on April 24th at Kirbyville, Texas.

Individual clothing for the men was carried in barracks bags. Rifles, for men so armed, pistols, cartridge belts, canteens with cup and cover, two bed blankets, shelter tent, mosquito bars, raincoats, saddle bags with mess and toilet equipment were carried by each man.

The convoy reached Jasper, Texas at noon of the 25th of April.

Serial No. 2, Train No. 1, entrained at Spofford, Texas, April 25th under the command of Lieutenant Colonel Harry A. Flint. The movement included 13 Officers, 179 enlisted men, 227 riding horses and 26 pack horses.

Serial No. 3, Train No. 2, under the command of Lieutenant Colonel Gordon J. F. Heron, entrained at Spofford, Texas, April 25th with 14 Officers, 187 enlisted men, 307 riding horses and 45 pack horses. Trains arrived at 5:00 and 7:00 A.M., Saturday, April 27th respectively at Jasper, Texas.

Motors and men of the motor convoy met the trains as they arrived. Baggage was loaded in trucks and sent to camp. Horses were ridden to camp which was located 4 miles southwest of Jasper and 300 yards north of Holly Springs road.

To many of the enlisted men, this trip to southeast Texas furnishes an opportunity for visiting their families. Approximately 200 enlisted men of the regiment come from towns adjacent to Jasper.

6th Cavalry—Ft. Oglethorpe, Georgia

Colonel John Millikin, *Commanding*

Training

On December 27, 1939, instructions were received from the Adjutant General to increase the enlisted strength of the 6th Cavalry from 659 enlisted men to 1088 enlisted men, effective January 1, 1940. The enlistment of over four hundred recruits was completed by February 1, 1940, through combined recruiting activities of the 6th Cavalry and the Fourth Corps Area Recruiting Service.

During the months of January and February much new equipment arrived. To date the full allotment of scout cars and motorcycles, have been received and intensive training has been conducted to efficiency train scout car drivers, radio operators, motorcycle drivers, through means of schools conducted by Headquarters Troop and The Mechanized Squadron. This training was conducted in addition to the recruit training given to newly enlisted recruits.

The Horse Squadron, meanwhile, has concentrated on recruit training, Reconnaissance work, and practice in loading and unloading horses on the one trailer in the regiment. Ramps resembling trucks were built at each one of the 3 Horse Troops and practically all horses now will load willingly and quietly.

The month of March is being devoted principally to tactical training by Squadron and regimental exercises. Tactical training of the entire regiment is handicapped by the non-arrival of the trailers for transporting the Horse Squadron. However, to instill the presence of the horse elements in all problems, one squad is porteed by the trailer now on hand. All training is directed toward the perfection of team work between horse and mechanized units prior to the participation of the regiment in maneuvers at Fort Benning and in Louisiana during the months of April and May. It is contemplated that the Horse Squadron (Troops A, B, and C) will march to Fort Benning, leaving here April 3rd. The regiment (less 1st Sq.) will leave April 8, or 9, camp with 1st Squadron for one or two nights, executing reconnaissance missions for a day or two and the entire regiment to assemble and march into the bivouac at Fort Benning on April 12th.

As a culmination of its intensive training period, the regiment will for the first time be presented to the public at a review on 29 March.

The ceremony will be in honor of Major General W. C. Short, who will command the IV Army Corps to which the 6th Cavalry is attached for maneuvers.

General Short will be met at the Chattanooga Airport by Colonel Millikin and Troop "G" (motorcycle troop) under Captain John K. Sells, will act as escort to the review field.

This escort is an innovation in that General Short will be the first American General to be escorted by a complete cavalry troop with motorcycles for their mounts.

At conclusion of the ceremony, Colonel Millikin was host to General Short, the officers of the regiment and a number of civilian guests, at a field luncheon served in the field from one of the new kitchen trucks of Headquarters Troop.

PERSONNEL

Major Candler A. Wilkinson is back on the job, having been released from the Army and Navy General Hospital, Hot Springs, apparently none the worse for his illness.

The following new arrivals have been received as pleasant additions to the social life of the regiment and garrison:

Captain and Mrs. John K. Sells, and two daughters; Captain and Mrs. Douglas Cameron, and daughter; and First Lieutenant Kelso G. Clow.

In addition to the new arrivals, a hearty welcome has been given to the following officers attached for temporary duty with the regiment:

Captain Charles P. Bixel, attached from Command and General Staff School, Fort Leavenworth, Kansas.

First Lieutenant William B. Fraser, attached from the Cavalry School, Fort Riley, Kansas.

First Lieutenant Harry E. Lardin, attached from the Cavalry School, Fort Riley, Kansas.

First Lieutenant Francis J. Murdoch, Jr., attached from the Cavalry School, Fort Riley, Kansas.

First Lieutenant Thomas D. Gillis, attached from the Cavalry School, Fort Riley, Kansas.

First Lieutenant Bruce Palmer, Jr., attached from the Cavalry School, Fort Riley, Kansas.

The experiences of the regiment during April appear earlier in this issue of the CAVALRY JOURNAL under "The 6th Cavalry in the IV Corps Maneuvers."

* * *

8th Cavalry—Ft. Bliss, Texas

COLONEL JOSEPH P. ALESHIRE, *Commanding*

On March 11-12; 18-19; and 25-26; the regiment participated in Division field exercises at which the Staffs of the 22d; 23d and 24th Cavalry Divisions of the National Guard were present initially as observers, and actively participated prior to the completion of each exercise. These exercises were in the nature of an advance to seize and organize ground for defense, followed by a delaying action including a night withdrawal, and return to the post on the following day.

Second Lieutenant Carol I. Cahoon, Cav-Res., of Berkley, California, reported for a six month tour of active duty with the regiment on March 12th and has been assigned to Troop "A."

The following named Cavalry Reserve Officers have recently reported for and completed 28 days of active duty:

Major Peter A. Frederickson, Jefferson City, Missouri.

Major Edwin A. Gajeske, Brenham, Texas.

Captain Joaquin C. Carrillo, Tucson, Arizona.

Captain Charles W. Jones, Lexington, Kentucky.

First Lieutenant John H. Haas, Omaha, Nebraska.

First Lieutenant Embry D. Lagrew, Lexington, Kentucky.

First Lieutenant Norman W. Parsons, New Cumberland, West Virginia.

First Lieutenant Lawrence B. Shallcross, Kirkwood, Missouri.

Second Lieutenant Robert T. Beasley, Hinton, West Virginia.

It is with regret that we lose Captain Thomas F. Sheehan who was detailed to the Quartermaster Corps and appointed assistant to the Quartermaster, Fort Bliss, on April 8th. Captain Sheehan has been assigned to the 8th Cavalry since June 11, 1934, and was on duty with the Civilian Conservation Corps for two years, returning to the regiment September 5, 1938. Since that time he has been in command of Troop "E," and then Regimental Supply Officer. Captain Aladin J. Hart has been relieved from command of Troop "E" and assigned to duty as Regimental Supply Officer. First Lieutenant Henry T. Cherry, Jr., has assumed command of Troop "E."

On March 28th a composite squadron commanded by

Major James S. Rodwell, composed the escort for the dedication of a monument, "The Cavalryman" which stands in the park in front of the Shrine Temple in El Paso. This monument was made possible through the will of the late Percival Henderson, and was carved by Mr. Jose Rivera of New York City. The Corps Area Commander, Major General Brees was present and gave the principal address.

The regiment participated in a Division Review on Army Day which was witnessed by many dignitaries and citizens of the Southwest. Following the review the 2d Squadron, commanded by Lieutenant Colonel Edwin E. Schwien demonstrated dismounted attack followed by hasty action on the part of the Provisional Machine Gun Squadron, composed of the 7th and 8th Cavalry, and commanded by Captain Ralph M. Neal, 8th Cavalry. General Edwardo Hay, Secretary of Foreign Relations, Mexican Army was present and received the salute. During the afternoon Point to Point races were held, in which the riders from the 8th Cavalry placed as follows:

Regimental Point to Point:

Larkwing, ridden by Second Lieutenant Ira B. Richards, Jr.

Colonel, ridden by Second Lieutenant F. Raymond King, Cav-Res.

Slow Time, ridden by Mrs. Frederick H. Gaston, Jr.

Dona Ana Point to Point:

Reno Handsome, ridden by Sergeant Creswell Odess, MG Troop.

On March 29th, a Regimental Horseshow was held in Howze Stadium featuring the following classes:

Class I—Remount Training, consisting of schooling, jumping, and combined phase.

Class II—Open Jumping.

Class III—Novice Jumping.

Class IV—Green Polo Ponies.

Class V—Horsemanship—Enlisted Men.

Class VI—Hunters Sweepstakes.

Class VII—Officers Equitation—Jumping.

A horseshow being held at this time was quite appropriate and supplemented the civilian activities in El Paso, where the Shrine Directors were holding their annual convention, and the Sheriff's Posse its annual Live Stock Show and Rodeo.

In Class I—Remount Training, no effort was made to show just how much the remounts could do, but rather to bring out the state of training. All remounts had received not more than 35 days of training since being received in the regiment. They were shown in schooling, and over a course of small jumps. The remounts were originally divided into three platoons upon initiating their training and the platoon leader whose platoon made the highest aggregate score in both phases received a trophy presented by the Regimental Commander. This honor went to Sergeant Robert L. Robertson, MG Troop, the trophy being a combination cigarette case and lighter with his name engraved thereon. In the schooling phase and the combined schooling and jumping phases, the results were the same, 1st Place being taken by *Johnnie Bump,* ridden by Private DeJardo, MG Troop, 2d Place, *High Time,* ridden by Corporal Welch, Troop "E," 3d Place, *Eagle,* ridden by Private Fisher, MG Troop, and 4th Place, *Trickey,* ridden by Private Forbes, Troop "B." In the Jumping Phase places were awarded to *Eagle,* ridden by Private Fisher; *Charleswood,* ridden by Private Clements Troop F; *Hightime,* ridden by Corporal Welch, Troop "E;" and *Happy Jack,* ridden by Private Bradley, MG Troop.

In Class II—Open Jumping, there were 19 competitors, the places being awarded to *Bashful,* ridden by Captain W. H. Greear; *Scarface,* ridden by Corporal Lonnie Black, MG Troop; *Airmail,* ridden by Sergeant Carnes, Troop F and *Jeff,* ridden by Sergeant Robert L. Robertson, MG Troop.

Class III—Novice Jumping, was for any horse or rider, *neither of which* had ever competed in a regular 1st Cavalry Division Horse Show. This class brought out several new horses and riders who presented prospects of future Division Horse Show entries. Results of this class were: *Harmon,* ridden by Private Acker, Hq. & Serv. Troop; *Charleswood,* ridden by Private Clements, Troop F; *Legs,* ridden by Private Anderson, Troop F and *Highlander,* ridden by Private Gardner, MG Troop.

In Class IV—Green Polo Ponies, both public and privately owned mounts, was restricted to ponies that had never played in a match game. First place was awarded to Captain Ellis, our Regimental Veterinarian, showing *Plantation Walk,* his private mount. Other places were *Croseal,* shown by Captain Neal; *Moro,* shown by Captain Valentine; Captain of the Regimental Polo Team and *Zarina,* shown by Lieutenant J. J. Wilson.

For Class V—Horsemanship, Enlisted men, *Airmail,* ridden by Sergeant Carnes, Troop F, took 1st Place. Other places were taken by *Rhumba,* with Sergeant Joe L. Pruitt, Hq. & Serv. Troop; *Naughty Boy,* ridden by Sergeant Albert Sanders, Troop F, and *Mint Julep,* ridden by Corporal Newpher, Troop B.

Class VI—Hunters Sweepstakes, was a class enjoyed by all, and places were awarded to *Naughty Boy,* ridden by Captain Greear; *Gunbooter,* ridden by Captain Miller, III; *Stroll Along,* ridden by Colonel Aleshire, and *Airmail* by Lieutenant Cherry, Jr.

In Class VII—Officers Equitation Class and Jumping, competition was keen, due to several horses having to jump-off for first place, which was taken by *Betsy Belle,* ridden by Lieutenant Glenn S. Finley, Cav-Res., on duty under the Thomason Act; *Colonel,* ridden by Lieutenant F. Raymond King, also a Thomason Act officer; *Reveille,* ridden by Lieutenant Connor and *Westerman,* ridden by Lieutenant J. J. Wilson.

Judges for the show were:

Major General Kenyon A. Joyce, USA.
Colonel Innis P. Swift, Cavalry.

Colonel John K. Brown, Cavalry.
Colonel Edgar W. Taulbee, Cavalry.
Lieutenant Colonel Rinaldo L. Coe, 7th Cavalry.
Major John H. Irving, 8th Cavalry.
First Lieutenant Harry W. Candler, Cavalry.

During the Regimental Horseshow held on March 29th, the Post Commander, Major General Kenyon A. Joyce, presented to the 8th Cavalry Basketball Team the trophy for winning the Post Championship, the 77th Field Artillery Invitation Tournament Trophy and the Wilson Connelly Trophy.

The Basketball Team was honored with a beer party and dutch lunch on April 3d, at which time the Regimental Commander presented each member of the team with a blue jacket with the lettering "Post Champions, 1940."

On April 11, the regiment was inspected by Colonel William F. Robinson, Jr., (Inf.), Corps Area General Inspector. Troops were inspected dismounted in front of barracks, followed by inspection of barracks, with all field equipment displayed on bunks, followed by inspection of vehicles, animals and stables. The regiment was highly commended on the excellent appearance of personnel, and condition of equipment and buildings.

The Post Recruit Detachment was disbanded on March 13th, and all recruits turned to duty, fully trained and in condition for the coming IX Corps and III Army Maneuvers in East Texas.

A Brigade Pistol Competition was held on April 13th, in which each troop of the regiment had an entry. Sergeant Sidney J. Ashley, Hq. & Serv. Troop won the Brigade Commander's prize of $5.00 for making high score in the regiment.

The 8th Cavalry Pistol Team, composed of Sergeant Harold Young, Troop F, Sergeant Sidney J. Ashley, Hq. & Serv. Troop, Sergeant Oliver D. Milton, Troop E, Sergeant Roy Barr, Troop B and Sergeant Wm. R. McClain, Hq. & Serv. Troop, accepted the challenge of the Brigade Headquarters Troop Pistol Team for a competition, and on April 17th, defeated them by a score of 1,249 to 1,206.

On Saturday, April 20th, the 8th Cavalry Motor Serial consisting of 27 vehicles, 9 officers and 131 enlisted men, Major J. S. Rodwell, 8th Cavalry, in command departed from Fort Bliss, as part of the 1st Cavalry Division Motor Column, for the III Army Maneuver area in East Texas. The Division Commander reviewed the entire column consisting of six serials, on the drill field, east of the stables. The vehicles moved out from a mass formation of six closed parallel columns, without interval, with each vehicle gaining 100 yards distance as it moved out. More than an hour elapsed before the last vehicle cleared. The march was made with over night stops at Ft. D. A. Russell; Ft. Clark; Ft. Sam Houston; Houston and Kirbyville, Texas. Arriving at Jasper, Texas, in the maneuver area one day prior to the regiment, where it was busily engaged clearing sufficient brush, vines and undergrowth for the regiment to bivouac.

The remainder of the regiment, with the 1st Medical Squadron, attached, traveling on two trains, departed from Ft. Bliss at 7:00 and 10:00 A.M., April 24th, stopped over for 8 hours in San Antonio, for watering and feeding animals, and arrived at Jasper, Texas, approximately 28 miles west of the Sabine River and Louisiana Border at 9:00 and 11:00 A.M., on Friday April 26th.

No animals were injured in the movement in spite of the fact that five stock cars had to be replaced en route due to breaking of old brittle wood in the slats. Each train was completely unloaded and all personnel, animals and impedimenta moved from the detraining point in less than one and three quarters hours after arrival. The terrain of the initial bivouac area was disappointing, and particularly so when the customary "Army Weather" arrived the second night.

All concerned were glad to leave when the regiment, as part of the 1st Cavalry Division, and the IX Corps, marched east at 7:00 PM, Monday, April 29th, under tactical conditions. The march commenced in a downpour of rain that started more than 24 hours previous to departure, but which ceased about an hour before the regiment halted in bivouac for three hours rest and breakfast about 2:00 AM, after being on the road for 7 hours. At 5:00 AM, it moved north to play its part in the first of 3, three day, continuous "Corps Exercises" against a represented hostile force controlled by personnel of the 4th Cavalry and IX Corps Staff.

The following named Reserve Officers were assigned for 28 days active duty and joined in the field at Jasper, Texas, and were assigned as follows:

Lieutenant Colonel Herbert H. Frost, New York City Headquarters, 1st Squadron.
Major Daniel P. Lane, Webster Groves, Missouri—Headquarters and Service Troop.
Major Bruce M. McDill, Columbus Ohio—Headquarters, 2d Squadron.
Captain Wallace S. Phinney, Springfield, Massachusetts—Assistant S-4.
Captain James D. Morrow, Germantown, Pennsylvania—S-2.
Captain Edwin F. Fuller, Nashotah, Wisconsin—Machine Gun Troop.
First Lieutenant Donald J. Houghton, St. Johnsbury, Vermont—Troop A.
First Lieutenant Albert J. LeBreton, Jr., Picayune, Mississippi—Troop B.
First Lieutenant Erwin E. Burbank, West Allis, Wisconsin—Troop B.
First Lieutenant John S. Little, McAlester, Oklahoma Troop E.
First Lieutenant Russell O. King, Barre, Vermont—Troop F.
First Lieutenant Stanley W. Tyler, Melrose, Massachusetts—Machine Gun Troop.
First Lieutenant Wallace J. Nichols, Albany, New York—Troop E.

First Lieutenant Jack A. Ford, Los Angeles, California —Troop E.

First Lieutenant Robert C. L. Robertson, Med-Res., Houston, Texas—Medical Detachment.

First Lieutenant Glen F. Patton, Kansas City, Missouri, Vet-Res.—Veterinary Detachment.

The first exercise included contact with the enemy along the west bank of the Sabine River; reconnaissance and preparation for attack; attack and disposition for holding ground when the advance was stopped. It was terminated at 12:00 PM, on Wednesday, May 1, by receipt of a radio message, "Exercise terminated, bivouac in nearest suitable location." The nearest location which happened by good fortune to be at hand, was "most" suitable, and will long be remembered as the pine grove on the hill where the sun came out. Maneuver conditions ceased until dark the following day which was spent in drying out blankets, clothing and equipment.

On May 2d, while men and animals rested, the regiment was paid, and as no place existed in the vicinity to "Go Shopping," the coin of the realm remained in circulation within the regiment, for the time being.

At 6:00 PM, on the same day tactical conditions were resumed and the regiment marched south toward Newton, Texas, to participate in the second 3 day, Corps Exercise, which for the regiment consisted of delaying action and defending in successive positions. The active part of this exercise was completed when the regiment bivouacked at midnight, May 3-4, about 2 miles east of Holly Springs. The leading horse elements reached the bivouac at 12:15 AM, May 4th, and all men and animals, except Troop B (attached to the 7th Cavalry), were bedded down by 2:00 AM, after more than 30 hours continuous action for most of the men and animals. The response of personnel to trying weather conditions and long hours has been conspicuous by the desire of all concerned to play the game as the rules are written.

One more Corps Exercise is scheduled before completion of the IX Corps training phase, when the III Army phase will start on May 9th. As the regiment, as part of the IX Corps will be operating against actual troops of the IV Corps, rather than against "Control Troop and Flags," this phase should prove most interesting and instructive.

* * *

11th Cavalry—Presidio of Monterey, California

COLONEL HOMER M. GRONINGER, *Commanding*

Their chests still expanded from compliments received from the Chief of Cavalry on 25 April, troopers this week (first in May), are making ready for the 11th Cavalry's participation in the final phases of the 3d Division maneuvers which will be completed by 15 May.

Impromptu demonstrations of the regiment's proficiency in arms were staged in a one-day rainstorm on 25 April, the occasion being a visit to the 11th Cavalry in its new tent home in Camp Clayton by Major General John K. Herr, Chief of Cavalry. General Herr inspected the Cavalry camp, addressed the assembled regiment briefly on the value of horse troops in any sort of a war and attended an officers' luncheon. This was followed by demonstrations of combat firing by both squadrons, the Machine Gun Troop and the Scout Car platoon, and an exhibition of training by the regimental recruit detachment. The General, accompanied by Colonel Groninger and his staff, also saw each organization enter a team of three riders in a hunt course exhibition near the camp.

The following letter was given Colonel Groninger by General Herr:

> "COLONEL GRONINGER:
>
> "I wish to express my appreciation to you and to your officers and men for the enthusiastic showing you put over under adverse conditions. I saw what I like most, the ability '*to take it and like it*.' This is what marks real soldiers: To have what it takes.
>
> "JOHN K. HERR,
> "Chief of Cavalry."

Final training "job" for the regiment will be to assist the 4th Infantry fight off the 3d Division's northward invasion, beginning 6th May, in the Corps Area Commander's Tactical Inspection. A review for the commander, Lieutenant General John L. DeWitt, was held on 2d May at Parker Flats and the following day the general inspected Colonel Groninger's command at Camp Clayton, where the regiment has been camped since 15th April. It is expected the balance of the regiment will move back to Presidio of Monterey barracks after the 15th of May, leaving detachments at Camp Ord to prepare for summer camps.

Twenty-eight-day Reserves added to the regiment during April included Major J. F. Reynolds, assigned to S-4; Captains F. W. Goates (1st Squadron) and Leland Gee (2d Squadron), and Lieutenants W. F. Cheney (Troop B) and Horace Booth (Troop F). Captain Goates, on 18 April, suffered serious hip injury when his horse fell and was removed to Letterman General Hospital (San Francisco) for treatment.

Regimental losses in officer personnel during the ensuing summer will include Major F. C. DeLangton, who has been ordered to Albany, New York; Major William S. Conrow, to Iola, Kansas; previously Lieutenant Colonel Lester A. Sprinkle has been ordered to Fort Snelling, Major C. H. Gerhardt to the War College, Captain Lyman Judge to the Command and General Staff School, and Captain Frank G. Trew to signal detail at Fort Monmouth.

Private Charles Masiakowski, Headquarters and Service Troop, suffered fatal burns on 31 March in a fire of undetermined origin which consumed the sleeping quarters of the 11th Cavalry motor pool at Monterey Presidio.

A new step in combined training was written into the records the 7th March when noncommissioned officers of the S-1, -2 and -3 Sections and the Scout Car platoon made hour-long observation flights in ships of the 91st Observation Squadron operating from Monterey airport. Purpose of the flights were to acquaint key NCO's with the general picture of the peninsula road net and with problems of ground concealment from the aerial viewpoint.

Early in April the two squadrons completed their annual practice marches prior to the regiment's move to Camp Clayton. The 2d Squadron, under command of Major Wayland B. Augur, marched to San Luis Obispo, participated in combined training with infantry units of the 3d Division there, and returned to the home station. At the same time the 1st Squadron, commanded by Major Gustav Guenther, made a practice march which included a week of patrol work in the Big Sur region.

Regimental athletics have had a varied fortune in the 3d Division competitions. The basketball team wound up its season in April with five wins, five defeats, losing the last game to the 15th Infantry, 50-42. Boxers ended their tournament competition 29th April with a total of 31 bouts won, 25 lost. The team was fifth in a field of nine. The regimental golf team, playing a series of five matches with various Division opponents, was undefeated for the season, and the pistol team consistently placed high in Division shoots. On 31 March the novice pistol team placed one-two-three in the Division meet.

12th Cavalry—Fort Brown, Texas

COLONEL ARTHUR F. WILBOURNE, *Commanding*

During the months of March and April, the 12th Cavalry, was busily engaged in target practice and in the preparation for the oncoming Corps and Army maneuvers to be held in the Sabine-Angelina area.

The regular target season practice for pistol, dismounted, pistol mounted, and light machine gun was completed during this period. Fifty per cent, as scheduled by the Brigade, of riflemen and heavy machine gunners completed their regular season's practice. The remaining fifty per cent will fire upon return to home station after the Third Army maneuvers.

The Brigade Commander, Brigadier General J. M. Wainwright conducted his annual tactical and training inspection of the command early in March, and on April 13th, he conducted the annual tactical and training inspection for the Division Commander.

On Saturday, April 6th, a demonstration as a part of the Army Day activities was staged for the public. Keen and lively interest was displayed by the visitors. Due to the publicity given the program by newspapers in the Rio Grande Valley and different military organizations, there was a turnout of about 6,000.

In the morning the entire scout car platoon in charge of Lieutenant Samuel M. Hogan, was sent in a group, on a circuit, to the neighboring towns to give the populace an opportunity to see the new scout cars. The people were genuinely interested in the cars, asked numerous questions about the mechanical functioning of the cars; the value and efficiency of the radio sets in a tactical situation and also were intensely interested in the car's fighting ability in a tactical situation. In the afternoon demonstrations covering the following activities were staged:

a. Troop barracks were opened up and all visitors, conducted by N.C.O. guides were shown through barracks, kitchens, and stables.

b. The 1st Squadron, Major Olin C. Newell, in command put on a mounted review.

c. The Communications Platoon of Headquarters and Service Troop, Lieutenant Daniel E. Still, in charge, gave a demonstration of radio communications, using mounted messengers, radio pack sets, and scout cars.

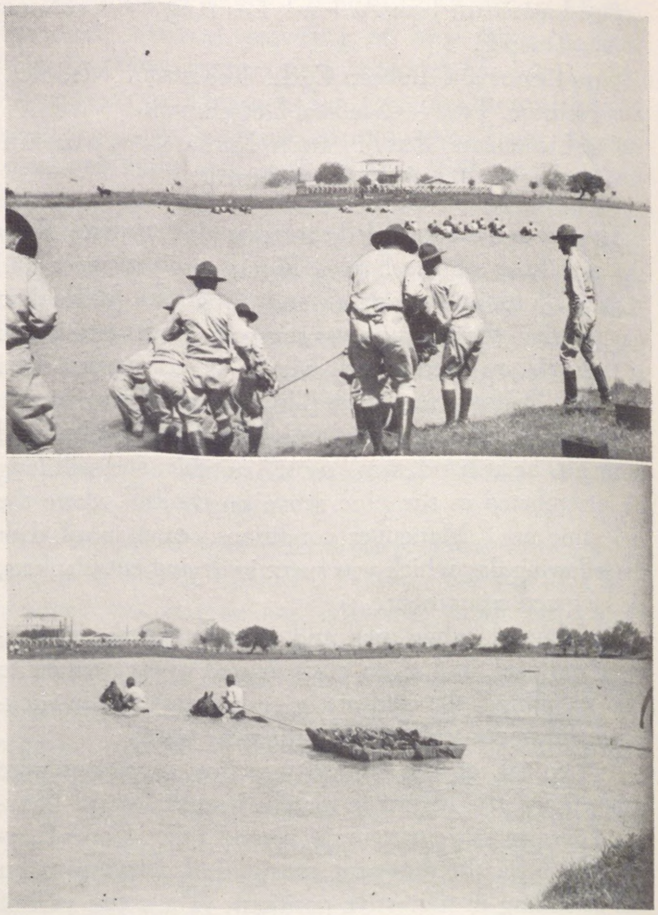
d. Machine Gun Troop, Captain Henry R. Westphalinger, in command gave a demonstration of machine guns coming up and going into action.

e. Musical chair—two men from each troop.

f. Jumping exhibition by officers.

g. A demonstration, under smoke screen, showing a mounted column approaching a river; the foremost elements swimming, the units from front to rear all swimming the river after the preceding element had crossed by swimming, was staged. During this demonstration a smoke screen was laid down. Heavy machine guns covered the crossing; other machine guns, in improvised pontoons were towed across by men riding on horses.

h. A polo game between two officer teams. One team made up from officers regularly assigned to the regiment,



Top—Preparation for the rivers of East Texas and Louisiana. Bottom—Portage of weapons and equipment.

the other team composed of officers attached for temporary duty.

From the 13th to 16th of April, the Boca Chica target range was the scene of both day and night activity for tactical training. The march both to and from the area was accomplished under cover of darkness the motor train and scout cars moving without lights, using the "belly lights" as prescribed by the 1st Cavalry Division. Problems in reconnaissance, counter-reconnaissance, security on the march, seizing and holding a position, outposts, withdrawals and delaying actions, night movements, communications and supply were conducted. Trains were considered as tactical and not permitted to operate in a purely administrative manner.

During the period March and April the following named Reserve Officers were attached to the regiment for active duty training for a period of 28 days:

From March 26, to April 22—Captains Dan C. Simpson, Cav-Res., and Ralph J. Ford, Cav-Res.; First Lieutenants Oliver H. Cornelius, Cav-Res., James B. Stapp, Cav-Res., Jose A. Castillo, Cav-Res., Charles D. Fuller, Cav-Res., Henry B. Davis, Jr., Cav-Res., Horace G. Goodrich, Cav-Res., and Roy Lasseter, Jr., Cav-Res.

Joined April 27 in maneuver area—Majors George Danhour, Cav-Res., and Howell E. White, Cav-Res.; Captains Harold W. Cole, Cav-Res., Luther A. Holmes, Cav-Res., James E. Hubert, Cav-Res., and Carl A. Kah, Cav-Res.; First Lieutenants Richard W. Keith, Cav-Res., Nelson N. Burns, Cav-Res., Walter J. Buboltz, Cav-Res., Louis E. Powell, Cav-Res., Turner M. Rathrie, Cav-Res., Howard M. Stellar, Cav-Res., Robert C. Freihube, Cav-Res., Arthur W. Johnson, Cav-Res., Harold A. Patton, Cav-Res., and Oliver W. Orson, Vet-Res.

On April 23d the motor column of trucks and scout cars of both Fort Brown and Fort Ringgold left at 1:00 PM for the maneuver area and arrived on April 25th.

On April 26 two trains carried the men and animals from Fort Brown, Texas, and one train carried the men and animals from Fort Ringgold, Texas, to the maneuver area, arriving at the detraining point, Jasper, Texas, on April 27th. Both officers and men of the 12th are always glad to operate as a regiment, though each group is convinced that his station is the better.

All the Reserve Officers who joined the regiment in the maneuver area admit freely that the going is tough but in spite of their physical condition all are hanging on even if some do have a "Camp Pike or Bust look." To date none have busted—all credit to them.

On April 27th both the motor column and train serials bivouacked near Jasper. The regiment had barely moved into camp when it started to rain. The local inhabitants claim that this rain broke a five-year drought. On the 29th a night march of 17 miles was started but ended up at dark the next night with 65 miles (measured) chalked up to the credit of the regiment. On April 30 we started out again at 7:00 PM, we were still on the move.

"The Army Relief Party was held at the Officers' Club under Major Newell's able organization and leadership. Thanks to the coöperation of the residents of the community and of Fort Ringgold and Fort Brown, the post was able to contribute $500.00 to the Army Relief Fund."

106th Cavalry—Detroit, Michigan

Lieutenant Colonel Roy F. Bierwirth, *Commanding*

On Saturday evening, April 6th, the Seventh Annual Regimental Small-Bore Competition was held at the Detroit Cavalry Armory.

Five-man teams representing Troops I, K, A, and B participate in this event.

Troop B team was declared the winner for the sixth successive time. Team scores were as follows:

Troop B, 719; Troop I, 699; Troop A, 681, and Troop K, 681.

High individual score was made by Sergeant Chester Harvie of Troop B, his record being 149 x 150.

The troops are looking forward to the summer maneuvers to be held at Camp McCoy, Wisconsin.

112th Cavalry—Dallas, Texas

Colonel Clarence E. Parker, *Commanding*

On March 2d, a dinner was given at the Dallas Athletic Club by the officers of the regiment honoring Lieutenant Colonel John M. Thompson, the regimental instructor, who had received orders assigning him to duty at Headquarters, IV Corps Area, Atlanta, Georgia. Colonel Thompson had been with this regiment since November 30, 1936, and the officers and men feel keenly the loss of this excellent instructor. General Walter B. Pyron, the brigade commander, expressed the opinion that the creditable improvement which this organization has made in the last few years could be attributed almost entirely to the energetic and intelligent efforts of Colonel Thompson.

Under his supervision, both the officers' and noncommissioned officers' schools have been developed to a plane of remarkable efficiency. He secured training films, sand tables, and other necessary equipment. He spent many hours and rode many miles arranging terrain exercises.

Colonel Thompson always encouraged competitive programs. His first year he was instrumenal in drawing up a squad competition which involved every squad in the regiment and lasted over a period of several months. The following year a platoon problem was held on a more elaborate scale. This year, in line with Colonel Thompson's suggestions, the Pyron Trophy competition has been developed, which, by the end of the training year, will provide an excellent comparison as to the manner in which each troop has followed the regimental training program. One of the most instructive and interesting exercises during Colonel Thompson's tour was a point to point ride for the officers and another for the noncommissioned officers. General Pyron stressed particularly the notable improvement made in the appearance of the regiment during Colonel Thompson's three years as its instructor.

Another federal inspection has come and gone. The inspection was made this year by Lieutenant Colonel Rex Willoughby. After the long day Captain Louis Beecherl of Machine Gun Troop gave an informal dinner party in honor of Colonel Willoughby. Captain Beecherl has been complaining loudly of late of being overworked due to the loss of two of his lieutenants, Cowan and Leonard, who are attending the Cavalry School. He is being assisted, however, and ably so, by Lieutenant N. J. DeSanders, Jr., of the Organized Reserves.

Captain Mann of "E" Troop has a new school graduate, Sergeant Bryan W. Albright. On April 20th, Troop "B" held a very interesting night problem. Captain Star borrowed sufficient horses from Machine Gun Troop to mount his entire troop. Headquarters Troop furnished transportation, communication, and staff personnel. The troop was divided into two platoons; each given a mission, which, after a 15-mile march, would bring them together.

"A" Troop has completed a new supply room at their new armory which sets a new high in supply efficiency. Everyone is happy to hear that the captain's little daughter, Patsy Newman, is greatly improved after a long and serious illness.

Troops "I" and "K" of the new 3d Squadron have received their government mounts and Major McIntire is elated at the manner in which they are applying themselves to the fine arts of horsemanship and horsemastership.

The sergeant instructor, John Menard, reports that "F" Troop continues to measure up to the high standard that Captain Phillips demands. The sergeant also reports that the Medical Detachment is rolling bigger and better pills. Warrant Officer Harris and his band are freshly inspired after having read of the importance of the bands in Germany's invasion of Norway.

* * *

62d Cavalry Division, 305th Cavalry—Philadelphia, Pennsylvania

COLONEL VINCENT A. CARROLL, *Commanding*

Major Streicher, S-3, conducted a mobilization test on April 6th, which resulted in sixty-five per cent of the personnel reporting to headquarters. It was felt that this percentage could be improved, however, considering that only 24 hours notice was given and quite a few of those not reporting did not receive the notice in time to report, the results were considered generally satisfactory.

Through the courtesy of Captain Alex. Davisson, commanding Company M, 111th Infantry, the officers of the regiment were invited to fire the cal. 22 heavy machine gun at Company M's Armory at Media, Pennsylvania. A number of officers turned out and fired the new machine-gun target on the 500-inch range.

Mr. Henry N. Woolman, President of the Horseshoe Trail Club, exhibited several reels of colored pictures of the Horseshoe Trail at a recent Wednesday noon luncheon and invited members of the regiment to make use of the trail. The trail, which is about 90 miles long, extends from Valley Forge to Manada Gap in central Pennsylvania where it connects with the Maine to Georgia Appalachian Trail, cutting across the rolling hills of eastern Pennsylvania, with less than a mile of its length along paved highways, it is the fulfilled dream of horsemen of this populous region.

By popular request, Commander Brown of the U. S. Navy returned for another of his exceedingly interesting talks. The commander cleared up many of our rather hazy ideas about the navy and was still busy answering questions a good hour after the luncheon was over.

On April 20, Regimental Day was celebrated at the Lilacs Club in Fairmount Park, Philadelphia. Colonel Carroll gave a brief talk reviewing the progress of the regiment and commenting especially on the increased activity since the coming of Colonel Frank Chapin as unit instructor. He then presented the following prizes and awards:

John C. Groome Memorial Award to Captain John H. Allen for best attendance at mounted drill.

Field Officer's Award to Captain James C. Gentle for having done the most to promote the *esprit de corps* of the regiment during the past year.

Regimental Commander's Award to Captain Forrest H. Riordan, Jr., for having done most for the professional advancement of the regiment during the past year.

Equitation Trophy of the Military Order of the Loyal Legion to First Lieutenant Paul J. Weimar as the best trained horseman.

Colonel F. K. Chapin Equitation Award to Second Lieutenant Bert Freeman for having shown the greatest improvement in equitation during the past year.

General George G. Meade Memorial Cup presented by Major May S. Easby to Lieutenant Colonel Leslie C. Bell for the highest efficiency rating during the last active duty period.

Extension School Award to Captain Edward E. Young for having completed the greatest number of hours in the Extension School during the past year.

Squadron Cup to the 2d Squadron for having attained the greatest number of inactive duty training hours during the past year.

Captain Harold McKinley Award to Private Richard Walsh for having shown the greatest interest in the regiment among the enlisted men.

Night Terrain Exercise Awards to First Lieutenant Frank K. Renninger and Second Lieutenant Cornelius J. McGroarty as the team who covered the prescribed course of 30 miles, reporting at four stations and covering the distance in the shortest elapsed time.

Following the presentations, First Lieutenant Paul J. Weimar read the *Regimental History*. Cocktails were then served which was followed by a buffet supper and dancing.

Captains J. Douglas Morrow and Thomas E. Meehan have been ordered to Jasper, Texas, for the Cavalry Division maneuvers. Reports are that they are both enjoying the tour of duty and that Captain Morrow is acting as Assistant G-2 on the Division Staff. We haven't heard specifically what Tom's duties are, but we'll wager our new grass headdress that he is riding around in the general's car, if the general has a car.

First Lieutenant Gene Mohen reports that Fort Riley is all that it is cracked up to be and then some. The following is an excerpt from a letter of his, "Magazine Canyon slide . . . five in hospital! two pay problems this wk. Hunter Trials Sat. Fired M-1 rifle, Heavy M.G. at night. .50 cal. and 37-mm. tomorrow, longed horse, dance at Club followed by Hunt Breakfast, next week 110 mile march—no U yet but beer twice, so long, must study." We are sure that Gene is getting the most out of Riley.

The gods smiled upon us on Sunday, May 3d, when the sun shown and the weather was balmy for the 305th Cavalry Horse Show at Major Alfred Biddle's estate at Newtown Square, Pennsylvania. Over 50 thoroughbreds participated in the six classes before a crowd of several hundred. Captain Jim Gentle, riding his horse *Toss* took second place in the 4-foot inside course and third in the Hunter Trials. Captain Howley on *Tess* took second place in the Hunter Trials being nosed out by a beautiful girl on a beautiful mare. Captains Gentle and Howley ran the horse show and the concensus was that it was a fine piece of work. Plans are now being formulated for another in the fall.

* * *

306th Cavalry—Baltimore, Maryland

COLONEL MATTHEW F. JAMES, *Commanding*

Conferences were conducted by the Baltimore units during March and April by Captain H. G. Sheen and Lieutenant E. A. Cockey on "Squadron in the Defense," Colonel Bruce Palmer spoke on "Horse versus Mechanized Cavalry," and Captain Graham Dukehart had the subject "Signal Communications." A problem on the first subject was presented by Captain Sheen in his usual straight-from-the-shoulder manner and the detail of the actions and orders of the smaller units of the squadron made a highly interesting and instructive conference. Colonel Palmer in his lecture presented the tactics and technique of both branches of the Cavalry Arm.

The Baltimore units gave a stag party on the evening of March 30th. Due to other rival attractions, the party was small but select. Twenty-one officers of the regiment attended the dinner at the Northway and the affair broke up in the wee, small hours. All were delighted that Colonel James was able to break away from his business trip to preside as toastmaster. Colonel Bruce Palmer was the guest of honor.

Recent changes in the regiment:

Promotions—Captain Thomas H. Mundy to major; First Lieutenants Graham Dukehart, Yorke C. Mills, George E. Monk, and Clarence S. Wilcox to captains; Second Lieutenants Edwin B. Clopton, Charles H. Dunphy, and Thomas E. Jarman, Jr. to first lieutenants.

Assigned—Captains Alexander M. Stewart, Everette D. Wilberger, Carroll Wright, and Byrnal M. Haley, Dent-Res.; First Lieutenants John K. Cunningham, Emil W. Kerttu, Walter L. Renn, and Robert L. Alkire, Vet-Res.; Second Lieutenants Pearson W. Brown, Donald F. Forbes, Fred J. Hughes, John H. O'Donovan, Horace B. Ritchie, Jr., and Dean S. Zinn; Private Philip Mancuso.

Relieved—First Lieutenants Joseph B. Mosteller and Reverdy E. Winfree; Second Lieutenants William E. Burton, James A. Dixon, Donald F. Forbes, John S. Higgins, Jr., Robert G. Long, Wilfred S. McClaren, Robert G. O'Hara, and Bernard Rubenson.

The features of the past two months in the inactive training of Reserve Cavalry Officers in the Washington, D. C., military area have been the lectures of two outstanding cavalrymen, namely, Brigadier General H. S. Hawkins, U.S.A. (Retired), and Colonel Bruce Palmer, Cavalry, Chief of Staff, 62d Cavalry Division. These two lectures gave the Reserve Officers a better understanding of the rôle of Cavalry, both horse and mechanized, in modern warfare. Both lecturers drew illustrations of their points from their experiences and gave their own analysis of some of the phases of the present European war, thereby intensifying the interest of their audiences.

Equitation classes at Fort Myer and Matches of the Cavalry Pistol Team have been interesting activities in which the officers have recently engaged.

* * *

308th Cavalry—Pittsburgh, Pennsylvania

COLONEL GEORGE H. CHERRINGTON, *Commanding*

The period of indoor conferences that terminated in April was most successful from the training standpoint. All subjects were presented by officer members of the regiment and the schedule stressed basic instruction in mobilization, administration, weapons, horsemastership, and tactics. When available, training films were used to supplement these conferences and taught their lesson, most effectively. This type of instruction is very valuable to a reserve regiment and the interest shown is definitely reflected in the attendance.

Beginning with the first of May, training activities were shifted out of doors to the Regimental Training Center and training periods were increased to two a week—Wednesday evenings and Sunday mornings.

This spring the regiment has much additional territory over which to ride, thanks to the activities of the recently organized Fox Chapel Trails Association of which our regimental commander is a director and to which a number of our officers belong. This association, composed of a group who are interested in riding, has cleared or improved about 80 miles of trails in the vicinity of our training center. In addition to these trails, we have permission to ride over many privately-owned farms so that much of our spring training will consist of tactical rides and terrain exercises.

Captain John B. Benney and Captain Edwin P. Geesey have been ordered to 28 days' active duty with the 1st Cavalry Division which is taking part in the Third Army maneuvers in the Western Louisiana and Eastern Texas area.

The regiment welcomes Captain John Lehner, Jr., and Second Lieutenants Thomas V. Brooke and Edwin A. Hartley, all of whom are recently assigned.

Lieutenant Morry R. Evans, 107th Cavalry, Ohio National Guard, was a recent visitor. He was impressed and quite enthusiastic about our training facilities which we are told are unique in Reserve organizations. We are always glad to have cavalrymen from other regiments visit us and take part in our activities.

The new *Regimental Roster* just published shows a strength of 68 officers, 5 enlisted reservists and 8 attached medical officers.

* * *

318th Cavalry—Chicago, Illinois

LIEUTENANT COLONEL WILLIAM A. PETERSON,
Commanding

Inactive duty training for the regiment as a unit has been considerably handicapped due to the fact that about fifty per cent of the officers live outside the Chicago area. To overcome the disadvantages occasioned thereby, the regimental commander and Major George B. Morse, regimental executive have in coöperation with Major Roye P. Gerfen, the unit instructor, devised a plan whereby all elements of the regiment are now officered by men who live in the Chicago area and who have expressed their desire and ability to attend all regimental schools. Officers not specifically assigned within the regiment are still members thereof, and in a sense constitute a Reserve ready to fill M-Day vacancies and replacements.

It is sincerely hoped that our inactive duty training will be benefited and facilitated through this closer integration of the regiment. The advantages appear obvious.

On April 20-21 a contact camp held at Fort Sheridan, Illinois, was exceptionally well attended. The program was featured by a review of C.M.T.C. training which the regiment will conduct in July, combat firing exercises and a tactical ride. These camps repeatedly prove their value in building *esprit* and efficiency.

The 1940-41 inactive duty training program has been planned to give special attention to training in troop leading, by use of a series of map maneuvers. The reorganization and reassignment of officers as herein stated will induce an increased attendance at the regimental schools and the map maneuvers will afford all officers an opportunity to function in grade, and in the next higher grade, aside from the many other advantages this type of training provides.

During the past year there has been a marked increase in attendance at regimental schools, the training program having covered C.M.T.C. subjects, use and care of weapons, use and care of animals in garrison and field, and minor tactics.

* * *

Norwich University R.O.T.C. Unit

Norwich has enjoyed another year of expansion. Not only in barracks and other facilities, but in the number of students enrolled in the R.O.T.C. and a corresponding increase in the number of public animals in the unit. The War Department has now authorized 80 animals as against the former number of 64. The additional number were received in two increments. A shipment of remounts in June and another in September. These new animals, after special training for a six-month period, are now full fledged troopers' mounts. They were a most welcome addition to a cavalry unit composed of 118 cadets in the advanced course and 237 in the basic course.

The annual summer march and camp of six weeks, during which time the unit spent two weeks in marching and four weeks at Fort Ethan Allen, Vermont, in camp, was most successfully conducted with a comprehensive and diversified schedule.

The school year opened with the loss of Major W. H. W. Reinburg, Cavalry, who was relieved from duty at Norwich to attend school at Fort Leavenworth, Kansas. Major Reinburg was replaced by Captain Wallace H. Barnes, Cavalry, who has taken over the duties of Assistant P.M.S.&T. and Adjutant.

The unit has plunged into a schedule of practical and theoretical training, as outlined by War Department directives, to prepare itself for the Annual Federal Inspection and it is hoped, a rating of "Excellent" again.

On February 16, 1940, at the invitation of Lieutenant Colonel Samuel V. Constant, commanding officer, 1st Squadron, 3d Cavalry, the second year advanced course students sent a 12-man horse show team to Fort Ethan Allen to compete in a Norwich Cadets' Jumping Class inserted in the 3d Cavalry February Gymkhana. The team, riding 3d Cavalry horses, put up a smart appearance and were well received by a packed house. First place honors and a silver goblet were presented by Governor Aiken to Cadet T. J. O'Dwyer of New Jersey.

The polo team, coached by Captain Clark L. Ruffner, Cavalry, expanded its schedule this year to 15 games, including the six major colleges in the east, and is participating in the National Indoor Intercollegiate Championships, held at Squadron "A," New York, beginning March 30th.

Another new barracks will be completed by the opening of school in September, 1940, and the expected enrollment in the unit is 425, the largest in the history of the school.

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